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ORIGINAL ARTICLES.

DIPHTHERITIC CONJUNCTIVITIS: REPORT OF TWO CASES, WITH THE BACTERIOLOGIC STUDY OF THE FALSE MEMBRANE.[1]

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UNDER the terms membranous, croupous, and diphtheritic conjunctivitis there has been described a variety of affections of the conjunctiva, the essential feature being the formation of a pseudo-membrane. The disease may be trivial, getting well under little or no treatment; or it may be the most dangerous of all of the conjunctival diseases, and destroy the eye, despite all one can do.

An attempt has been made to divide the pseudo-membranous inflammations of the conjunctiva into two classes, according to the situation of the false membrane. Thus, a plastic deposit sometimes forms on the palpebral conjunctiva during the course of a catarrhal or purulent conjunctivitis. Again, with only the symptoms of simple conjunctivitis, and without any purulency, a similar membrane may form. It is usually attached feebly to the conjunctiva and can be wiped off. Again, it may be more firmly adherent. When it is removed, the subjacent conjunctiva is found succulent and vascular, with, possibly, little bleeding spots marking the points of attachment of the false membrane. The ocular conjunctiva is not involved, and the lids are not indurated. To this form of the affection the name "croupous" or "membranous" has been applied by some authors, including Alfred von Graefe, Saemisch, Schmidt-Rimpler, Swanzy, and Macnamara. "The pathological process," says Bull in Soelberg-Wells's *Treatise*, "here consists mainly in the deposit of an albuminous exudation, probably fibrin, upon the surface of the inflamed conjunctiva, which deposit rapidly coagulates on exposure to the air, and thus assumes the form of a membrane. This deposit contains cells which have made their exit from the mucous membrane, and upon the number of these cells depend more or less the firmness and density of this membrane. . . . . Micrococci have sometimes been found in the secretion of croupous conjunctivitis, but not always."

A second variety of pseudo-membranous conjunctivitis is seen, to which the term "diphtheritic" has been applied. Here, early in the disease, the eyelids become swollen, hard, and, to all appearances, bloodless. It is always difficult and often impossible to evert them. There is either no discharge at all from the mucous surface, or it is watery. The palpebral and ocular conjuntiva is covered with a thick gray membrane. If an attempt be made to strip it off, it is found firmly adherent. If incised, the conjunctiva and lid-tissues are found infiltrated with this dense plastic material. The incision will be bloodless. This condition persists for several days, when purulent secretion sets in as the second stage. The lids become softer and the swelling disappears. The third and last stage is that of cicatricial contraction in the conjunctiva and lid-tissues. It will be seen that in the course of diphtheritic conjunctivitis, as described, the cornea is subjected, during the first stage, to the dangers of plastic infiltration and strangulation from the pressure on the vessels of the ocular conjunctiva; during the second, to the dangers of purulent ophthalmia; and, if it survive all this, it may eventually be made opaque by the cicatrization of the lids.

To summarize: the classical distinction between croupous or membranous, and diphtheritic conjunctivitis is this: In the former a false membrane forms *on* the conjunctiva, is limited to the palpebral portion, and when stripped off leaves the mucous membrane vascular. Diphtheritic inflammation invades both the palpebral and ocular mucous membrane, cannot be stripped off, infiltrates the tissue of the lids, and renders them hard, swollen, and bloodless. If the term diphtheritic were here used etymologically, and conveyed the idea only of a membranous formation, this distinction, though an arbitrary one, would suffice for clinical purposes. But there is inseparably associated with the word "diphtheritic" the idea of diphtheria; and "diphtheritic conjunctivitis" gives the impression of being a manifestation upon the ocular mucous membrane of this disease. Here one meets two facts that render a distinction, based upon the presence or absence of lid-infiltration, untenable, at least in the opinion of many, among them such authors as Nettleship, Jüler, Bull, and Noyes. These facts are (1) the production of a pseudo-membranous conjunctivitis, with hard lid-infiltration, by agents *not diphtheritic;* and (2) the large amount of clinical evidence that pseudo-membranous conjunctivitis occurs as a complication or

[1] Read before the Medical and Chirurgical Faculty of Maryland, April 29, 1892.

starting-point of diphtheria, the lid-infiltration being often absent. Soelberg-Wells, Nettleship, and others record the occurrence of lid-infiltration—clinically, diphtheritic conjunctivitis—from inoculations with gonorrheal pus, the too free use of caustics, and traumatism. Noyes mentions a case of his own "in a boy, ten years of age, operated upon for strabismus; the dense, gray, plastic infiltration extended from the wound over the ocular and then over the palpebral surfaces, with the typical characteristics of stiff and bloodless structures." One of the cases I shall presently report presented just such appearance, but there was no possibility of a diphtheritic origin.

Among the proofs that pseudo-membranous conjunctivitis occurs as a manifestation of diphtheria are the following: it has been found to prevail epidemically with diphtheria; to often precede faucial diphtheria, or to occur during its course; to be, apparently, a source of contagion for diphtheria to other persons, or to be contracted from another having diphtheria. Many of the cases of diphtheritic conjunctivitis occur either in connection with pseudo-membranous angina or alone, after the infectious diseases, scarlet fever and measles—so-called secondary diphtheria. Bacteriologic investigations have, I know, recently shown that many of these secondary diphtherias are not of the same nature as primary diphtheria, and should not be so termed. Still, until the demonstration of the Loeffler bacillus as the cause of primary diphtheria, they were so called, and are, I believe, clinically indistinguishable from the primary disease.

Concerning the occurrence of diphtheria of the conjunctiva, without lid-infiltration, Noyes records two fatal cases of diphtheria, which were first reported by Nettleship, in both of which the first manifestation of the disease was upon the conjunctiva, from which it spread to the nose and throat. There was never the lid-infiltration thought to be the diagnostic feature of diphtheritic conjunctivitis. It seems, then, impossible to separate croupous and diphtheritic conjunctivitis by objective appearances. Noyes proposes the term "plastic conjunctivitis" for all pseudo-membranous ophthalmias, irrespective of lid-infiltration, save those in which constitutional sysmptoms appear. These should be called "diphtheritic." It would seem more exact to limit the term to those cases occurring either alone, or in connection with pseudo-membranous angina, in which the Loeffler bacillus is found. It is doubtful, however, if this is practicable. So far as we know at present, the presence or absence of the bacillus diphtheriæ in plastic infiltration of the lids would affect treatment not at all, and prognosis very little. Add to this the difficulties of a bacteriologic examination, and it is probable that the adoption of Dr. Noyes's suggestion is the nearest approach to exactness that can be expected.

There is very little to say about treatment. The most important thing is not to use astringents during the first stage—that of plastic infiltration. They can only do harm. This is about the only point in the treatment of the first stage upon which there is a consensus of opinion. One finds the same thing here that is found in other intractable diseases—the suggestion of a host of remedies. Cold and antisepsis seem to meet with favor most generally. I fear, however, that the following from Soelberg-Wells comes near the truth: "We have, unfortunately, but little control over the disease during the first period." During the second stage—that of purulent secretion—the principles that govern the treatment of purulent conjunctivitis will hold.

I have seen four cases of diphtheritic conjunctivitis. It is a very rare disease. Two occurred in the private practice of Professor Chisolm, who kindly allowed me to examine them.

One was in a girl, sixteen or seventeen years old. Only one eye was affected. There was board-like infiltration of the lids and conjunctiva. The eye was lost. There was diphtheria in the house at the time, but the conjunctivitis was the only evidence of diphtheria in this girl.

Professor Chisolm's other case was seen at the Presbyterian Eye and Ear Hospital two years ago. An old gentleman had undergone cataract-extraction. For a week his case progressed smoothly. Then a slight catarrhal conjunctivitis set in. A weak solution of silver nitrate was used once a day, and the eye was kept clean. Suddenly the lids became enormously swollen in the course of two or three days. A membrane appeared on the palpebral and ocular conjunctiva, infiltrating the lid-tissues, and the cornea sloughed. There had been no exposure to diphtheria. Professor Chisolm tells me that he sent a piece of the pseudo-membrane to Professor Welch, who pronounced it non-diphtheritic.

Both of my cases occurred in the practice of Dr. S. W. Seldner, who kindly referred them to me.

CASE I.—On the afternoon of December 20, 1889, Dr. Seldner asked me to see Joe H., six years old. The Doctor himself had been called in only on the same day. From the parents I learned that the child had just recovered from measles. It had not been thought necessary to send for a physician. They had not even kept the boy in bed. For two or three days the child had been complaining of his eyes. Within thirty-six hours, certainly, of the time Dr. Seldner, the family physician, had been sent for, the pain had greatly increased, and the lids had become so swollen as to close the eyes. There had been a little watering. The child was crying from pain when I entered the room. The lids were swollen, hard, and tense. The integument had a waxy appearance, and seemed bloodless, save for

two or three engorged veins. The lightest touch caused intense pain. It was necessary to administer chloroform before the eyes could be examined. This done, the lids were forcibly separated, and partly everted. Complete eversion was impossible. There was no discharge. The conjunctiva of each eye was covered with a thick gray membrane, extending from the lid margins, above and below, over the palpebral membrane, the fornix, and ocular conjunctiva to the cornea, where it abruptly terminated in a hard, slightly elevated ring. A few small ecchymoses were visible on that part of the false membrane covering the lids. By rather vigorous rubbing with a piece of absorbent cotton a few threads of the membrane were detached from the lid. The subjacent surface was dry, hard, and of the same color as the rest of the false membrane. There was a haziness about each cornea, but no point of ulceration. The pupils were moderately contracted—probably from the chloroform. The anterior chambers were of normal depth. After the child had recovered from the anesthetic, I carefully examined his throat and nose, but found no evidence of diphtheria. Ice-compresses, to be kept on constantly, and the hourly washing with a 1:5000 solution of mercuric chloride, were ordered. At the same time, the hazy look of the cornea induced me to put a drop of atropine into each eye. Leeches were considered, but were rejected on account of the boy's feeble condition.

The temperature was elevated, and remained so for several days, the variations being from 100° to 102°. It was generally a fraction over 101°, and varying very little. A mixture of quinine and iron, ordered by Dr. Seldner, was continued. I saw the boy again at 8 P.M. He was easier, and wanted the cold applications all the time. The objective appearances were unchanged, save that each pupil was somewhat dilated by the atropine, the left more so than the right. I now made an incision into the hard, elevated ring around the right cornea, through the conjunctiva, to the sclerotic. There was not a drop of hemorrhage. Cold and the corrosive wash were continued during the night, as well as two instillations of atropine. The next morning (December 21st) the appearance of both lids and globes was practically unchanged. The pupils had not been affected by the atropine, probably on account of poor absorption. There was pain on touching the lids, but otherwise not much suffering. That evening the boy was again in pain, the cold failing to relieve him. Both corneæ were more hazy, but I was not able to find a point of ulceration. Hot applications were now substituted for the ice. I was led to make this change because the cold was no longer relieving the pain, and I thought the corneæ might stand a better chance with hot than with cold applications. Again, I was influenced by a statement of Nettleship's, that when cold fails to benefit, heat may increase the fluid exudation, and determine blood to the lids. Thus, the approach of the blennorrheic stage might be hastened.

The next morning (December 22d) the appearance was unchanged. The corneæ, though hazy, were both transparent. While I was inspecting the right eye, the boy made a sudden movement of the eye upward, possibly increasing the pressure on the weakened cornea. The aqueous gushed out through a pinpoint perforation that was invisible. That evening, as I very gently raised, as well as I could, the hard lid, I found on the left cornea what I at first thought to be a thread of membrane. It proved to be a corneal slough, and when the pressure of the lid was removed, lens and vitreous gushed from the globe.

The next morning (December 23d) I found that the right cornea had sloughed during the night. The blennorrheic stage did not set in for eight days after the eyes were lost. A piece of the false membrane from the right upper lid was taken to Dr. Alexander C. Abbott, then of the Johns Hopkins Hospital. I am unable to say by what methods Dr. Abbott examined the membrane, but his well-known skill leaves no doubt of their thoroughness. He found an abundance of organisms—the streptococci being present in large numbers—but nothing that would justify him in calling the case one of primary conjunctival diphtheria. The Loeffler bacillus was not present.

The family to which this boy belonged consisted of five children, a daughter of seventeen, my patient of six, and three little boys, one and a half, two and a half, and about four years old, respectively. There had been nine children in the family, and three of them had died, some years previously, within a few days of one another, from diphtheria, secondary to scarlet fever. When I was called to see Joe, on December 20th, I found his brother Frank, the baby, suffering from acute otitis media, which had come on, according to the parents, during an attack of measles early in December. On the 24th, Dr. Seldner told me that the two other boys had been taken ill. Both had a slight eruption which we thought scarlatinal. On the 25th, the diagnosis was unmistakable in the four-year-old boy, Albert, while the eruption was indefinite and pale in the child two and a half years old. There was, however, a diphtheritic membrane in this boy's nose. Several times this little fellow nearly strangled, and finally died of exhaustion on January 6, 1890. Albert's case was complicated by a purpuric eruption on the legs, and the formation of blood-crusts about the lips. He seemed, however, in a fair way to get well. On the 5th of January, Frank, the baby, who was said to have had measles early in December, was taken with faucial diphtheria, which rapidly spread to the larynx, and he died on the next day, a few hours after his brother. On the same day (6th) Albert, who, we thought, was convalescent, was taken as Frank had been on the 5th, and died on the 8th. I have always regretted that I did not try to get a bacteriologic examination of the false membranes in these three cases. Neither Dr. Seldner nor I had, however, any doubt of the diagnosis, and I personally did not then appreciate the importance of such examination as I do now.

CASE II.—On March 16th last, Dr. Seldner sent for me to see E. S., a boy, three years old. The child had recovered from measles several days previously, when on March 12th a membrane appeared

in the pharynx. On the following day, membrane was also found in the nose. The father of the child noticed some swelling of the right upper lid on the 15th. On the morning of the 16th he discovered that the left eye was watering and closed. On the afternoon of this day I saw the boy. I found in the pharynx a pseudo-membrane. The nostrils were obstructed, but whether with false membrane or secretion I did not determine. The lids of both eyes were somewhat, but not greatly, swollen. The right lid was easily everted. A gush of tears led me to carefully inspect the cornea, and a small ulcer was found. The conjunctiva was dry, and entirely free from false membrane. The lids of the left eye were harder, and it was more difficult, but not impossible, to evert them. The upper lid was lined with false membrane, from the margin to the fornix. The conjunctiva of the lower lid and globe was not invaded by the membrane. A piece of the false membrane was stripped off, and the conjunctiva found gray and infiltrated. The cornea was clear. Cold and a 1:3000 corrosive solution were ordered. Atropine was also used. Dr. Seldner was treating the boy constitutionally. On the 17th, about twenty-four hours after my first visit, I found both pupils moderately dilated from the atropine, but the swelling and hardness of the lids were unchanged. The pseudo-membrane had extended from the conjunctiva of the left upper lid to that of the globe and lower lid. It had also appeared on the right upper lid. At 2 A.M. on the 18th the boy died of suffocation. The piece of membrane removed on the 16th was taken on the same afternoon to Dr. Simon Flexner, Professor Welch's assistant. I also took Dr. Flexner to see the child on the 17th, and he obtained cultures from the throat and left eye. His report is appended:

"The first cultures were made from the membrane which was brought me in water. The first tube from this consisted almost, if not entirely, of the short bacilli, which I regarded then, and am still inclined to the same idea, as having been extraneous. The succeeding tubes from the membrane showed fewer bacilli, and more organisms, consisting chiefly of chain-cocci. This would seem to indicate that the bacilli were on the surface of the membrane only, and could readily have been derived from the water. As the deeper parts of the membrane were reached, these organisms were not present, at least not in predominating numbers, as they were in the first tube.

"The second examination comprised both the eyes and the throat. In neither of these cases were the bacilli before-mentioned observed, and these cultures were taken directly from the patient. In these the predominating organisms consisted of chain-cocci (streptococci). This was true of the throat and the eyes, and the cover-slips, made directly from the exudation, showed this, as well as the cultures. It is true a bacillus was found, but in small number, and it was excluded from being the diphtheritic bacillus of Loeffler. Its morphology was different, and its culture-properties also.

"I do not see any escape from viewing this process as of streptococcus origin. There were no organisms present which rendered the diagnosis of diphtheria probable; and, on the other hand, we know that there are pseudo-membranes produced in the throat, nose, and eyes in which the streptococcus is the exciting cause. . . . It is very probable that the pseudo-membranous affections of the air-passages and conjunctiva in scarlet fevers are due to a streptococcus."

Were it not for the deaths of the three little brothers of my first patient from what seemed a virulent form of diphtheria, there would be no reason to doubt that the diphtheritic conjunctivitis was of the same origin and nature as in my second case. There are several standpoints from which these cases may be viewed, among them: First. That all were secondary to scarlet fever or measles, and non-diphtheritic. In favor of this one notes (*a*) that pseudo-membranous affections, after infectious diseases, are now known to be usually non-diphtheritic; (*b*) that Dr. Abbott did not find the Loeffler bacillus in the ocular pseudo-membrane; (*c*) that, although Dr. Seldner did not see either of the so-called cases of measles occurring in my patient and the baby, Frank, early in December, it is quite certain that both of these children had either measles or a very light form of scarlet fever; also that one of the two children taken ill on December 24th certainly had scarlet fever, and there is very little doubt in the case of the other. Against the view of secondary origin must be noted the virulence of the throat-affection, the interval of nearly a month between the disappearance of the measles in the case of the baby and the appearance of pseudo-membranous throat-trouble, and the occurrence during this month of my case and two fatal cases of what was clinically malignant diphtheria. A second possibility is that my case was non-diphtheritic, and that the child in whose nose we found a membrane on December 25th—twenty-four hours after he was taken ill—had contracted primary diphtheria from an independent source, and infected his brothers. Thirdly, it is possible that all four cases were diphtheritic, the bacillus in the ocular pseudo-membrane remaining, for some reason, undiscovered.

In the literature of diphtheria there are only incidental allusions to the bacteriology of pseudo-membranous conjunctivitis. The few that I have found I owe to the kind help of Professor Welch. Artificial conjunctival diphtheria has been produced in cats by inoculation with the Loeffler bacillus. The bacillus has also been found in pseudo-membranous conjunctivitis occurring in connection with diphtheria.[1]

In a case reported by Trousseau,[2] secondary to measles, with loss of both eyes, and occurring in

[1] Kolisko and Paltauf: Wiener klin. Wochenschrift, 1889, No. 8.
[2] L'Union Médicale, 1887, No. 9.

connection with multiple abscesses and bronchopneumonia, Darier found the conjunctival pseudomembrane swarming with organisms, but he did not find the Loeffler bacillus.

The following propositions concerning pseudomembranous conjunctivitis seem to me justifiable:

1. There are two varieties: one of the same nature as primary diphtheria; the other apparently a sequel of many and widely different pathologic conditions, having no relation to diphtheria. "Plastic conjunctivitis" seems the most appropriate term for the latter variety.

2. The classical distinction between diphtheritic and membranous conjunctivitis, based upon the presence or absence of infiltration in the tissues of the lids and ocular conjunctiva, is inadequate.

3. The only absolute proof of the diphtheritic nature of a pseudo-membranous conjunctivitis is the demonstration of the Loeffler bacillus, or later, the occurrence of paralysis, or some other sequel of diphtheria. Clinically, the presence of constitutional symptoms is essential to such a diagnosis.

4. The cause of the pseudo-membrane in plastic conjunctivitis is not certainly known, and probably it is not always the same. In some cases, at least, there seems good reason to attribute it to the invasion of streptococci, an infectious disease, or catarrhal conjunctivitis, or traumatism, or scrofulous habit, or some other influence lowering the resistance of the tissues and paving the way for infection.

5. Plastic conjunctivitis may be more dangerous to the eye than a pseudo-membranous inflammation undoubtedly diphtheritic, experience showing that the danger is in direct ratio to the degree of lid and conjunctival infiltration.

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INSANITY IN PRIVATE PRACTICE.[1]

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To one who has had some experience in the care of the insane the first idea that presents itself when considering insanity with reference to its occurence in private practice is the great disadvantage of a medical education that fails to provide the average practitioner with any adequate knowledge of insanity.

The courses of instruction given at a majority of our medical colleges are such that it is possible for a man or woman to graduate in medicine and enter upon practice without ever having seen an example of insanity, or having gained any intelligent idea of the etiology, clinical history, diagnosis, prognosis, or treatment of insanity.

[1] Read before the Illinois State Medical Society, May 18, 1892.

These courses of instruction lay a foundation whereon a knowledge of most of the physical diseases may be built; but in reference to insanity, the fact that it has a physical basis in pathology is but imperfectly understood, and there is often even in the minds of otherwise able and intelligent physicians great ignorance, and even superstition, upon this subject. The older ideas of demoniacal possession or some mysterious and unexplained fatality have scarcely been outgrown. A disease that affects the operation of the mind is apparently removed from the category of ordinary diseases, and there is introduced a new and strange element that seems an insoluble puzzle.

The complete elucidation of the interdependence between the brain and the mind is not, in the present state of knowledge, possible. Griesinger, in his classical treatise, remarks that if some higher intelligence were to descend to us and endeavor to explain the manner in which insanity is produced our own intelligence would not be sufficient to grasp the explanation. This is probably true, and yet we are loath to admit that the subject is beyond comprehension. A famous professor of mathematics once remarked to me when I quoted Griesinger's statement to him, that if an explanation were offered him from any source he would try mighty hard at least to understand it. In the years that have elapsed since Griesinger wrote, it must be admitted that great progress has been made in arriving at a comprehension of the mode in which insanity is produced.

Years of experience with bodily diseases are of little assistance to the physician in coping with mental diseases, unless a solid foundation in nervous pathology has been laid. Metaphysical conceptions of mind render it difficult to understand that there is a physical basis for the disease, and in meeting a case of insanity the unaccustomed practitioner is suddenly confronted with a situation the key of which seems to have been lost. He is likely to think that it has been thrown into the deep well of metaphysical speculation, but in reality it is accessible, and it is only necessary to dig a deeper stratum of the same science of pathology that has been his guide in other diseases; but the opportunities for that deeper study have been lacking to most practitioners, and thus the "things that are not confound the things that are." The only remedy for this confusion is the thorough study of the anatomy, physiology, and pathology of the brain and nervous system as illumined by the newer researches of recent years.

The sciences of neurology and psycho-pathology are in their infancy, but great progress is being made at the present time in their elucidation. To the general mind there is an element of awe and mystery in insanity, and many a general practitioner

when brought face to face with an acutely insane patient may say, with Shakespeare, (substituting "insanity" for "conscience,") "thus insanity doth make cowards of us all," and he feels a degree of anxiety and confusion that are fatal to coolness of judgment. The masterly control of the situation which is his in ordinary cases is gone, and under such circumstances the disposition manifests itself to pass the case on, to call in the aid of extreme measures or to unload the responsibility in any manner that may be possible. In the larger cities it is often practicable to secure the advice of one who is familiar with the specialty, but the larger number of such cases occur in situations where they are beyond the reach of expert counsel, and the family physician is compelled to take charge of them, and do the best he can, and in dealing with them is in danger of making one or another of several common mistakes.

First. He may hurry the patient off to a hospital when such a course is not really necessary.

Second. He may keep the patient at home until some unfortunate casualty occurs, or until the most favorable time for treatment has forever passed away.

Third. In dealing with the case he may make unwise and unnecessary use of powerful nervines, sedatives, and narcotics. He may resort to harsh measures of restraint which are unnecessary, or he may indiscriminately indulge the whims and vagaries of the patients or their friends in such a manner as to be harmful.

In endeavoring to lay down a few lines for guidance in this matter I will briefly offer some suggestions under the foregoing heads.

The reason for the embarrassment of the general practitioner is that he has had little or no opportunity of studying normal or diseased brains, either clinically or pathologically; and a great advantage might be gained in this respect by almost any practitioner who would lay out a course of reading on this subject, and would utilize every opportunity that offered for examination and study of brains, both normal and diseased; and for the convenience of anyone not familiar with the literature I append hereto a list of works that would be of value in such a course of study:

Sanity and Insanity (Mercier). Manual of Lunacy (Winslow). Mickle, on General Paralysis. Clouston. Landois. Bucknill and Tuke. Nerve-Prostration (Roose). Familiar Forms of Nervous Diseases. Diseases of the Nervous System (Gowers). Spitzka. Maudsley. Physiology of Mind (Carpenter). Lehrbuch der Psychiatrie (Krafft-Ebing).

On taking up the possibilities of error in dealing with a case of insanity in private practice I will speak of

First. Sending the patient too soon, or unnecessarily, to an insane hospital.

The sending of a patient to an institution for the insane is a grave step, and the decision on this point is often a difficult one.

The consequences are serious, especially as the insanity thus becomes a matter of public notoriety and record, and there is no denying that this is an injury to an individual in business and social life. Although the more enlightened opinion of the day recognizes insanity wholly as a disease, there is in the minds of many still an association of something disgraceful in connection with it, and in our own State of Illinois this fact is emphasized by the operation of the law that compels all insane persons to appear in court and be tried by a jury (?) before they can be sent to an institution for the insane.

An anxious question of the patients and of their friends in such cases is as to the treatment the patient will receive if sent to an institution. There is, undeniably, in the public mind an attitude of suspicion toward institutions for the insane, and a greater readiness to believe ill than well of them. Without attempting to discuss this, it can only be said on this point that, while there is nothing perfect in this world, and abuse and neglect may occur in such institutions, the greatest pains are, I believe, universally taken by those in charge to avoid abuse and neglect, and with my knowledge of this matter I feel justified in saying that the chances of patients in respect of their treatment are better in than out of the hospital. The care of the patient's own family and friends is very likely to be injudicious, and not only injudicious but cruel. Some of the greatest barbarities I have ever known to be inflicted upon the insane were inflicted by their own family and friends, and it is my belief that there has been more illegal confinement and harsh and injudicious treatment in their own homes than in institutions.

The two things to be considered in deciding about sending a patient to the hospital are, whether there is serious risk to the patient himself or to others in keeping the patient at home; and whether the patient's own proper care and chance of cure require the supervision of the hospital.

To determine if there is serious risk it will be necessary among other things to consider whether there are hallucinations, auditory or visual, or of the other senses, which make the patient dangerous; whether there are tendencies toward suicide or homicide; whether there are perverted instincts or impulses to acts of violence, destruction, or outrage, and whether there is a prolonged loss of sleep or of food.

It is necessary to remember that in going to the hospital the patient comes in contact with others, and that such contact may be harmful, though every

effort may be made to avoid the harm from this source. In every well-regulated hospital special efforts are directed toward curative treatment and toward avoiding every association or contact that might be injurious.

The advantages at home are that the patient has the personal care of friends, and is not associated with other patients, and is in familiar surroundings. Certain forms of insanity may be more susceptible of care at home than others. Among these Hughes[1] mentions the insanity of pregnancy, childbirth, and lactation, alcoholic insanity, tuberculous or paralytic or senile insanity, to which I would add cases of hysteria, neurasthenia, and habit cases, generally of morphine, alcohol, etc., and also of helpless, feeble, and simply fatuous cases, although acute dementia may be marked by sudden violent outbreaks, necessitating the restraint of a hospital; and furthermore, in any one of the conditions mentioned the circumstances may be such as to require prompt removal to some institution.

If there is a removable cause and a prospect of early relief, it would be better to arrange for the care of the patient at home; to prepare a room, with screens at the windows, and secure one or more nurses, and endeavor to tide the patient over the attack. These arrangements may be made at a neighbor's house, or at the physician's house, or in any private house or sanitarium. Some of these patients may also go among relatives or travel without serious risk. In all of such cases, if possible, advice should be secured of some one having extensive knowledge of insanity. The pecuniary means and resources of the patient also enter largely as a factor in determining whether or not he can be treated at home.

If the patient is sent away there may be a choice between public or private hospitals, sanitariums, etc. Many patients require as a first requisite a total change of surroundings, and this may be secured without sending them to public hospitals.

When patients are kept at home certain adjuncts to their treatment may be useful, as baths in various forms, and massage. Shampooing of the head is often very soothing. A thing that renders home-treatment now more feasible is that there is an increasing body of skilled nurses and attendants becoming available. Many of the institutions for the insane have training-schools, and send out with the classes of their yearly graduates many well-qualified nurses and attendants, and the trained nurses and attendants of the general hospitals also can often be secured. If the patient is in good physical condition a large amount of exercise may be taken, to the point of physical fatigue, and better rest and sleep thus be secured. In all cases, patients should be largely kept in the open air, if their condition will admit of it, and sometimes to secure sleep at night a glass of milk-punch, or some malt liquor, will be more efficacious than large doses of hypnotics, and the after-effects will be less harmful.

Second. The next question has reference to keeping patients at home improperly. The reluctance of friends to send the patient away is often so marked that it must be confessed that there is more danger of improper detention at home than of premature sending to a hospital. The opposition of the patient or of friends in this respect is at times unreasonable, and at other times quite reasonable, and this point needs careful weighing. The advantages at home have been mentioned, personal care and the presence of family and friends, but there are certain cases in which these are injurious. Many patients are quite obstreperous and unmanageable with their own family and friends, who are easily cared for by judicious strangers.

Some patients must absolutely go to the hospital. Most cases of acute mania, of epileptic insanity, and of agitative melancholia, come under this head; also those who are excessively noisy, filthy, destructive, or have perverted instincts.

The cases in which the family and friends of the patient are not likely to give good care to the patient are those of hysteria and nervous prostration, in which the friends are over-sympathetic, and too much governed by the unreasonable fancies of the patient; and, on the other hand, if there is an overbearing and arbitrary disposition on either side, with irritable temper, cruelty may result. Another risk of not sending patients away is that their own family and friends, especially neurotic persons and children in the family, may be injured by the presence and contact of such persons in immediate daily intercourse.

Third. In considering the course to be pursued in case patients are treated at home, the following points should be taken into account: To secure, where it is available, expert advice; to avoid excessive use of drugs. Drugs form the smallest part of the treatment oftentimes, as it is the general surroundings and hygienic management, and the influences of a social, moral, and intellectual kind, to which we must look for benefit.

If patients cannot be kept at home without protracted stupefaction by drugs it is better to send them away. Hypnotics and sedatives should in general only be given at night, and the patient should through the day be free from their effect. If the patient is in good physical condition, a good deal of sleep may be lost in the early stages without serious harm.

[1] Alienist and Neurologist, vol. ii (1881), p. 28.

Nurses or attendants, one or more for day or night, or both, will generally be needed, and a room properly arranged for the care of the patient.

A constant lookout should be kept for the development of any dangerous tendency. Some frightful tragedies have occurred in the cases of patients treated at home, even in the practice of noted and experienced specialists engaged largely in this line of practice.

In dealing with patients, common sense must be applied to all that is done. The unreasonable whims of the patient should not be yielded to, and yet his harmless fancies should be gratified as far as may be possible and for his good. In some cases, it is especially important to avoid undue sympathy, and in others any harsh or arbitrary thwarting of the wishes of the patient may be harmful.

The question of application of any means of mechanical restraint, such as strait-waistcoats, muffs, wristlets, mittens, etc., often becomes an urgent one. It may be stated, as a general rule, that a case which cannot be managed at home without such means should be sent to the hospital. It will be a matter of exceeding rarity that anything of this kind need be employed under judicious management in an institution, and the resources of the institution for avoiding their use are far greater than those of a private house. Every possible resource should be exhausted before applying anything of this kind.

In conclusion, a word of advice as to the method to be adopted in case it becomes necessary to send a patient to the hospital. In dealing with the patient a frank and straightforward course should, under all circumstances, be pursued. One of the most vicious tendencies of the friends of patients and of those generally who have had no experience in this line is to conceal the truth from patients, to fall in with all their whims, delusions, and vagaries, as if they were believed in; to promise them everything they ask without any thought of keeping the promise; to tell them falsehoods, *e. g.*, that you do not believe them to be insane; that if sent to the hospital they are going to a first-class hotel to board, and have everything their own way; that if they go to the hospitals they are only to stay a few hours or days at most. All these methods of deceiving patients are injurious and harmful in a high degree. Patients should not be taken to the hospitals by deceit. Of the two, force is preferable to deceit. It is rare, however, that any patient who would be manageable under any circumstances would not be more so by being dealt with frankly and rationally, but kindly.

In conclusion, one guiding principle may be emphasized, which is more needed than any other in dealing with the insane, namely: To treat them as nearly as the conditions of their insanity will allow, in the same way that we would treat a rational fellow-being or wish to be treated ourselves.

SUGGESTIONS ON THE TREATMENT OF EARLY SYPHILIS.

BY ALFRED EICHLER, M.D.,
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AMONG the advances in therapeutics that have not been generally adopted by the medical profession should be mentioned the use of hypodermatic medication in syphilis. To one who has experienced in actual practice the faults and disadvantages of antisyphilitic medication by the mouth and by inunction, it is almost astonishing that so few general practitioners, not to speak of specialists, have taken up the subcutaneous method. Although I have employed injections of soluble mercurial salts only during the last two years, I have already become so thoroughly convinced of the utility and the advantages of the method that I desire to call further attention to its application.

One of the reasons why subcutaneous injections are not more frequently practised is, perhaps, that so many different agents, or rather salts of mercury, have been advocated for the purpose, with claims of special excellence for each one, as to almost confuse the uninitiated. The salicylate, thymolo-acetate, cyanide, benzoate, albuminate, and peptonate are the soluble preparations of mercury most often suggested, while among the insoluble, gray oil, the mild chloride, and the oxides seem to have the preference.

I have used the salicylate in only one case, and have found it not to possess any advantages over corrosive sublimate, which I have injected in all of my other cases, now some fifteen in number. I have always used corrosive sublimate in the solution suggested by Bartholow:[1]

℞.—Hydrarg. chlor. corros. . . gr. j.
Glycerin. } . . . . ää ʒj.—M.
Aquæ }
Ten minims contain gr. $\frac{1}{12}$.
S.—Inject ten minims daily.

I have injected this amount daily, always with the rigid antiseptic precautions, usually between the shoulder-blades or into the gluteal region. With the exception of my first case, I have never had difficulties of any kind following the injections—a fact that I attribute mostly to the antisepsis practised, as well as to the depth of the injections.

I found it necessary, however, from the outset to discard the ordinary hypodermatic needle. Instead I employ a thin, slender needle, not more than two inches long, such as are sold by instrument-

[1] Materia Medica and Therapeutics, p. 254.

dealers to morphine-habitués who practise hypodermatic injections. Injections with this needle cause almost no pain if the fluid is thrown sufficiently deep. Of course, it is necessary to have a number of needles on hand, as they often become clogged from the corroding action of the sublimate solution on the metal; if treated properly, however, by cleaning with warm water, and drying thoroughly after each injection, a needle will last for at least a half-dozen injections.

I wish to dilate somewhat on the plan of treating syphilitic patients that I usually employ. All of my patients of this class are private patients, and are therefore more easily controlled and better managed than migratory and unreliable dispensary or hospital out-patients. They are commonly seen shortly after the appearance of the primary lesion, and are then kept on some placebo, given, perhaps, with a view of regulating the bowels or quieting a disturbed digestive tract, until the appearance of a rash or other decisive symptom confirms the diagnosis of syphilis. During this time, the initial lesion is dressed once a day with an application of equal parts of mercurial plaster and carbolated vaselin. If the sore presents a mixed character, *i. e.*, if it partakes of the characteristics of chancroid, and is deprived of a mucous covering, with secretion of pus, an ointment of iodoform and vaselin (1 : 4), scented with oil of rose, is prescribed to be applied twice daily. The patient is instructed to call at least twice a week, and is examined thoroughly each time. After the primary lesion has healed, he has to call once a week until the rash has appeared. According to my notes, the earliest eruption occurred after the fourth week, and the latest after three months.

As soon as the eruption is seen, hypodermatic injections are begun. The patient calls daily at an hour agreed on, and receives an injection containing one-twelfth of a grain of corrosive sublimate, and five minims each of glycerin and water. I use a separate needle and a separate solution for each patient. The solution must always be kept perfectly clear. Before giving the injection, the back is wiped with absorbent cotton saturated with ether, over an area about five inches square, to remove perspiration, etc.; then a 5 per cent. solution of carbolic acid is applied by means of an absorbent cotton sponge; after the skin is thoroughly dried, another pledget saturated with pure ether is applied to the point at which the needle is to be introduced, thus temporarily producing a local anesthesia. The injection is then made by quickly introducing the needle deeply, until muscular tissue, or at least the deeper layers of cellular tisue, have been reached; the more remote from the skin the contents of the syringe are deposited the less the pain afterward experienced by the patient. The local anesthesia produced by the ether is sufficient to prevent the patient from feeling the injection, and often after the needle has been withdrawn have I been asked whether I had already injected. The injections are repeated daily until twelve have been given, representing a total of one grain of corrosive sublimate. They are then discontinued for one week. After that time, they are repeated daily until twelve more have been given. After the second twelve, I discontinue for another week, and then give the final twelve, making thirty-six in all. In a few instances of evidently very mild syphilis, I have omitted the third dozen. Ordinarily, however, I insist upon the full number of injections. It is astonishing how rapidly skin-symptoms disappear under this treatment. I have seen a marked syphilide subside after the third injection, so that by the last injection of the first twelve not a trace was noticeable. Mild eruptions have usually faded away by the eighth day. In a case of syphilitic alopecia, the hair began to grow after the eighth injection had been given, and within a month no bald spots were noticeable.

During all this time, I have the patient pay the strictest attention to his mouth. It is often stated that corrosive sublimate does not produce salivation as quickly as other mercurials; but then, as the absorption of the drug by the hypodermatic method is very rapid, I have always thought an ounce of prevention to be better than a pound of cure, and have abstained from determining the truth of the statement by actual experiment.

I prescribe for every one of my syphilitic patients a toothpowder composed of

℞—Potass. chloratis,
Pulv. aluminis,
Sacchari lactis, . . . āā ℥j
Pulv. kino, ... ℥j
Ol. menth. pip., . . . q. s.—M.

with instructions that it be freely used after every meal, with plenty of water and a not too hard toothbrush, at the same time suggesting frequent washing of the mouth with pure cold water.

I have thus far had no mercurial stomatitis to treat in my patients subjected to hypodermatic injections of soluble mercurial salts.

Recognizing that syphilis is a disease preëminently undermining the constitution and deteriorating the blood by the action of a special virus, I try to supplement the mercurial treatment by hygienic measures that aid in sustaining vital force. I request every one of my patients who does not lead an outdoor life to take a daily tramp of at least four miles, consequently of more than an hour's duration, preferably in one of the parks or along the bayshore. I further insist upon one point, and I think this more essential than the first: frequent baths, at least

three times a week, when not under treatment, and daily when injections are given. Cold-water baths, or at least water as cold as can be borne for fifteen minutes, is preferable; for swimmers—and the large majority of my patients were swimmers—I suggested open-air baths in the bay, even if the water was cold. After the cold bath, a walk of not less than fifteen minutes' duration should be taken.

I interdict alcoholic liquors entirely for those who have used them moderately; those accustomed to taking large quantities, especially of the stronger spirits and of beer, are ordered to limit themselves to claret and similar light wines. I believe that it is good practice during the taking of a mercurial course of any kind to relieve the excretory apparatus of all useless burdens, of which alcohol is certainly a considerable one. Further, as a majority of this class of patients are high livers, a temporary abstinence can only prove of benefit to them.

I have achieved success with this plan. The mercury subdued all symptoms promptly, while the physical exercise helped to build up the body materially. Almost all of my patients gained much in weight and strength. The physical appearance often changed rapidly. The skin, which had been rendered muddy by the protracted town-life and excesses in living, became clear and clean again; adipose tissue increased, and the patients became more robust in appearance. None of my patients has thus far needed more than thirty-six injections. As I have had none under observation for a longer time than two years, I may, perhaps, be somewhat rash in claiming unusual results for this plan of treatment.

Compared with other methods of treament—inunctions, the pill of the protoiodide, and Gibert's syrup—I claim that in all of my cases I have only noticed mucous patches in two instances, whereas previously to employing the hypodermatic method it seems to me that almost one of every three presented throat-lesions. Both of the two cases in which manifestations of syphilis reappeared, were engaged in the liquor business, and were perhaps exposed to greater temptations in the way of alcohol than the others. As their cases seemed mild, both had received only twenty-four injections, and under proper local treatment, gargling with solutions of potassium chlorate, and repeated applications of silver nitrate, and an additional dozen of injections, all lesions disappeared, and the patients have remained free since. In one, mucous patches had appeared in the fourth month, after the twenty-fourth injection, while in the other it was almost eight months afterward. Both have now been free for more than six months..

In none of the other cases have recurrences thus far been noted, and they are all yet under observation. None of my patients ever objected to hypodermatic medication, after the advantages and the promptness of the method had been fully explained. While there exists among certain classes a great prejudice against the hypodermatic syringe, mostly from fear of forming a habit, as soon as it is explained that all injections are given by the physician himself, that only a limited number is required, and that certain results can be quickly arrived at, then all objections on the part of the patient vanish, and in a short while he is more than pleased not to be compelled to swallow pills and mixtures, or even grease himself, but to be finished with all medication after he has paid his morning or evening visit to his physician. The latter also derives great benefit from the adoption of the hypodermatic method. In the first place, he has absolute control of his patient, thus gaining a point of great importance. Then, he employs accurate and exact dosage, as the injections are administered by himself, and there is no excuse for forgetting pills, etc. Further, there is more rapid absorption, and also excretion, than when either inunction or internal medication is employed, and consequently a more rapid disapearance of symptoms and local lesions. The alimentary canal is not disturbed at all; there is no diarrhea, as with the protoiodide or the tannate; there is less tendency to salivation than when inunctions are used, while the measure is more cleanly; finally, the proportion of relapses is, in all probability, diminished in comparison with other therapeutic methods.

The only requisites to a successful application are perfectly clear and properly concentrated and prepared solutions, absolute antisepsis, and deep injections with a fine needle, the further from the skin the better. I have never had any evil consequences, such as abscesses, except in my first case, in which I used an ordinary hypodermatic needle, and caused a good deal of pain, and set up a slight cellulitis by failing to inject deep enough. Since using the finer needles, and making deep injections, I have had no trouble and have caused no pain after the injection.

In the treatment of the later lesions of syphilis, I have not had much experience with the hypodermatic method, as a course of the iodides usually proves very efficient. I remember, however, one case that was sent to me. The patient, a young woman of doubtful character, had contracted syphilis about a year previously, and had been treated by a physician with pills of the protoiodide, taking as much as six grains in a day. After taking these for three months she thought herself cured, and omitted them until she began suffering from sore-throat. On examination I found a mucous patch on the soft palate almost as large as a half-dollar.

She received an injection of the sublimate daily for twelve days, with applications of silver nitrate, and after the eighth day nothing could be noticed in her mouth. This proved to me conclusively the effectiveness of the hypodermatic injections.

It has been suggested by some authors that a large quantity of mercuric chloride, say about a quarter of a grain, be injected into the buttocks once a week. I have always preferred to inject smaller quantities daily, even at the risk of causing a little more trouble. I believe that the small doses, frequently repeated, are more rapidly absorbed and excreted, and consequently exercise their effect sooner and more continuously than the large doses given only occasionally.

With injections of insoluble mercurial salts I have no experience. I have never tried them, and consequently my objections are based only on theoretic grounds. My first objection is that an insoluble preparation has to be converted by the action of the body-tissues and fluids into a soluble compound, and therefore I cannot comprehend why one should not inject a soluble compound at once. Another objection is that by reason of their insolubility they must be absorbed only gradually (during their residence in the tissues they are practically foreign bodies, therefore irritants). Although this slow absorption might at times be a desideratum, it is ordinarily a great obstacle, for, if symptoms of mercurial poisoning should arise, there would be no way of removing the injected mercury and all treatment directed to relieving the condition would be futile.

I might mention that when corrosive sublimate is injected beneath the skin, a hard nodule usually forms, which does not disappear for about a week; this is caused by the coagulation of the albumin by the sublimate, resulting in a hardening of the tissues, which, however, produces no ill results; in a week it is absorbed. When several injections are made at points close together, considerable tension occurs, from the pressing of the hardened tissues on the skin. This explains the weekly interval between each dozen of injections. The tension can, however, be easily relieved by the application of some softening ointment, rendering the skin more pliable. Tincture of iodine proves effective by stimulating absorption. When the injection is made deeply, preferably into muscular tissue, the consequence is insignificant, as the pressure and tension of the skin are relatively small. It is also wise to select for injection such parts of the body as are not subject to pressure from clothing, etc.

In giving thirty-six injections I have only attempted to set down a definite number, sufficient for ordinary cases. Whether this will prove enough in all cases for an eradication of the virus and subsequent immunity is a question that only time can settle.

A PLEA FOR SPECIAL STATE PROVISION FOR EPILEPTICS.[1]

BY THEODORE DILLER, M.D.,
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ALL who have dealings or are brought in contact with epileptics, either in a professional, business, or social way are, I am sure, impressed by the peculiar misfortune of these poor sufferers. It is indeed a cruel irony of fate that the wretched epileptic usually knows not when or where or in what manner he will succumb to an attack; that he knows not what fright, consternation, or distress his fit will bring to those about him at the time of its occurrence. His future is always uncertain; neither he nor his friends can ever tell just when, where, or how his plans may be interrupted. A lady who is an epileptic and whose fits occur rather infrequently, once told me that she would be well satisfied if they were to occur many times as frequently as they did, if she could only have ample warning of the approach of each seizure, so that she might be spared the frequent humiliation of creating a scene. True, some more fortunate epileptics experience auræ sufficient time before a seizure to seek a place of safety and retirement. Then, too, there are those whose fits occur so infrequently as not to create a very serious break in their life's work; again, there are those whose attacks are always of the *petit mal* variety. But it is not for these last-named types of epileptics that I want specially to make a plea before this Society. It is for the epileptic whose fits are frequent and violent; whose mental balance is shaken; for those who are either friendless or poor, or both; for those who are in the hospitals, asylums, or almshouses of the State, or in wretched homes. In making this plea for the epileptics in our asylums and hospitals, I also make a plea for the other patients in these institutions who are compelled to be kept associated with them.

The mental aberration in the epileptic varies from an almost inappreciable deflection, through many shades, up to the most pronounced dementia or violent frenzy (which last-named state is one of the most dangerous seen in asylums).

Generally speaking, only those epileptics whose fits occur very frequently or with great violence, or whose mental alienation is rather pronounced, are found in our general hospitals or insane asylums. Many epileptics are, however, in institutions who would not be there at all were their relatives so situated that they could be cared for at home.

In 1890, there were in the various State insane

[1] A paper read at the forty-second annual session of the Medical Society of Pennsylvania, at Harrisburg, May 17, 1892.

asylums, almshouses, etc., throughout the Commonwealth, under the jurisdiction of the State Committee of Lunacy, 615 epileptics, the great majority of whom were indigent. These, together with those in general hospitals, would probably foot up a total in institutions of over 1000. There are probably 4000 or 5000 epileptics of all grades living in Pennsylvania.

On account of the great variation in the degree and nature of the symptoms of these patients, they are in most of the hospitals for the insane distributed through nearly all of the wards according to their general mental condition and the frequency and character of the seizures. An epileptic whose fits occur infrequently, and whose mental condition during the intervals between attacks is good, is placed in a ward with the quieter patients, some of whom are convalescents. It would seem almost cruel to compel him to remain in a ward with the violent or chronic insane. The companionship would be a constant source of depression to him; yet, placed in wards in which he is more nearly on a par with his fellow-patients, while advantageous for the epileptic, is bad for the other patients in that ward. For the fit, though perhaps infrequent, comes, causing distress and excitement when it does come. Who is there among the laity, unaccustomed to the sight of an epileptic fit, who is not greatly shocked in the presence of one? Who, then, can tell the back-set which a patient convalescing from acute insanity may not receive from witnessing such a painful and revolting manifestation as an epileptic fit?

In some of our general hospitals a separate ward is provided for epileptics. This plan possesses the great advantage of sparing the non-epileptic patients the pain of witnessing epileptic fits; but it is unfortunate in that it compels the epileptic who enjoys the possession of nearly all of his mental faculties and whose fits occur infrequently, to associate with the epileptic dement who has many seizures daily.

If all of the epileptics now inmates of institutions in the State were to be removed from them, I am sure the patients remaining in these institutions would be much benefited; besides this, the management of these institutions would be not a little simplified. By placing the epileptics so removed in a pleasantly located hospital, specially equipped for their care, where they could be properly classified, they too, in turn, would be much benefited.

There are now so many different hospitals built with respect to accommodating various classes of patients that it seems strange that almost nothing has been said or done in this country for special provision for epileptics. We have the hospital for women; one for children; one for opium-habitués and alcoholics; one for nervous diseases; one for the acute insane, another for the chronic insane; one for the criminal insane; another for those suffering from tuberculosis; still another for those suffering from carcinoma. Yet the epileptic, whose disease is, in a peculiar way, a special disease, has no special hospital provided for him in the United States, with the single exception of Dr. Baker's institution at Baldwinsville, Mass. The subject has, however, been agitated in at least two States—New York and Massachusetts.

On the other side of the Atlantic the epileptic has fared much better; for in Europe we find special hospitals provided for him in France, Holland, Switzerland, Sweden, and Germany. It is in Germany, however, that the principle of separate care and treatment of the epileptic has made most progress; for in Germany there are no less than ten institutions whose sole mission is the treatment and care of epileptics. Probably the most notable of these institutions is that at Bielefeld, near Hanover. The medical profession should feel ashamed that the necessity of separate provision for epileptics was not only first recognized by a layman—the earnest, thoughtful Lutheran pastor, Von Bodelschwingh—but also received from him the first practical impetus which, twenty-five years ago, laid in a small way the foundations of what is now the great and wonderful colony of Bielefeld. This thoughtful, pious, philanthropic clergyman not only recognized the special and peculiar needs of epileptics, but he set about providing for them in a way that may well excite our admiration. Of course, much was learned by experience as the colony grew; of course, much was done that had to be undone, and many methods of dealing with patients that promised good results proved disappointing. The colony has, however, been so well planted; it has been so well shaped and nurtured; it is so well managed and equipped, that it may be seriously questioned whether we could to-day start a plant in Pennsylvania which would in any material or essential way improve upon it. From a beginning of twelve patients, twenty-five years ago, there are now upward of 1000 in the various departments of the colony.

The plain, simple, effective manner in which the colony is managed may well excite emulation. There are no great, tall, foreboding "institutional" buildings; but instead, many small buildings adapted for the various grades of patients. The ample grounds give opportunity for as much agricultural employment as the patients can manage. Provision is made for many different occupations, such as printing, brick-making, iron-working, shoemaking for the males; and tailoring, weaving, and domestic work for the women. The whole general appearance of the colony is rather that of a peaceful village than that of a hospital.

The advantages of the essential features of this colony will, I believe, very generally receive the approbation of those most extensively acquainted with epileptics. These features may be briefly summarized as follows: 1. The lack of institutional character in the buildings and the near approach to ordinary village or rural life. 2. The opportunity for the extensive classification of patients. 3. The ample provision for engagement in many and diverse occupations, so that all physically qualified can find work suited to their respective tastes and abilities. 4. The provision for the most favorable hygienic conditions; the best moral and therapeutic measures; and the best mechanical appliances, such as special low beds, etc.

These features ought all to be incorporated in the hospital or colony which, I trust, our State will, ere long, cause to be established.

What sort of cases ought a special hospital or colony of this kind to receive? Of course, it goes without saying that very many epileptics who possess a high degree of intelligence and are but infrequently disturbed by seizures, need no State care of any sort. Napoleon and Julius Cæsar afford remarkable examples of the achievements possible for the epileptic. Then, too, there are the epileptics who are in comfortable circumstances financially and who have many friends. These will be loath to enter an institution, and they are in most instances in good position to be cared for privately. The institution should be established primarily to provide for indigent epileptics. Provision ought also be made for the admission of pay-patients. Indeed, it might even be well to provide special accommodations for patients of this class upon payment of ample rates, provided such care would not be a detriment to the colony or to any other patients in it. I am not sure, however, that the well-to-do would not be better off in a separate institution under private management.

One very important matter in connection with an institution of this kind would be the legal status of the patients. It would be quite necessary, at least for the majority of the patients, that they be detained legally, much in the same way as the insane are now detained. Provision might, perhaps, be made for voluntary patients, somewhat after the fashion of the new Massachusetts lunacy law. The necessity for such power on the part of the institution must, I think, be apparent to all who are much acquainted with the whimsical and erratic nature of the class of epileptics that would enter such an institution. They are very prone to take umbrage without cause and to be greatly offended or slighted by little or no provocation. Then, too, there occurs in some the highly dangerous and totally irresponsible period of the so-called post-epileptic state. During these highly unstable mental states patients would often leave the institution, just at the time when they most needed its care, if there were no legal provision for their detention.

I am not prepared at this time to submit specific plans looking to the carrying out of the scheme that I have thus broadly presented to you. I trust, however, that a full and free discussion will follow, and that the Society will vote in the end to present a petition to the Legislature asking it to take measures to provide for such an institution as I have here advocated.

THE METRIC SYSTEM.[1]

BY A. L. BENEDICT, A.M., M.D.,
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A SYSTEM of weights and measures is to the physician what a system of money is to a business man—a useful and necessary adjunct, upon the convenience or inconvenience of which much depends, and which is not, on the one hand, defective, a barrier to success, or, on the other hand, perfect, a substitute for genuine business or professional ability. Our decimal system of money has doubtless saved the merchants of our country thousands of dollars in the value of their own time, in clerk-hire, and in lessening the liability to error in arithmetical computations, but we can scarcely say that a man is any shrewder in estimating values or, in general, any more successful in business because he calculates in dollars and cents instead of pounds, shillings, and pence. It certainly would be sheer nonsense to criticise a physician's intelligence or power of combating disease on the ground that his units of measurement were not in accordance with the highest scientific usage. I advocate the metric system of prescribing, therefore, with precisely the same feeling as I would advise the adoption of an improved instrument or a more convenient method of keeping accounts.

The advantages of the metric system over the apothecary's are: 1. The ease of computation characteristic of any decimal system. 2. The scientific and exact correspondence between the units of volume and weight, in contrast with the approximate relation of the minim to the grain. 3. The fact that those using the metric system are in harmony with the majority of scientific and medical men the world over; it must be remembered that our apothecary's system is only approximately related to that in use in the British Empire. 4. The provision of units capable of expressing small quantities, without recourse to fractions. These advantages are so plain and they have been so

[1] A paper read before the Erie County, N. Y., Medical Society, embracing a report as chairman of a committee appointed to investigate the practical use of the metric system.

widely discussed that no more time need be devoted to them, but I shall take up more at length some of the objections that have been urged against the use of the metric system.

1. The adoption of the metric system would necessitate the unlearning of that with which the majority of the profession are familiar, and would require additional exertion in learning a substitute. This is the same irrefutable argument that was urged against our decimal monetary system and which has been brought to bear against every effort at reform that has ever been proposed in any branch of human activity. It should be remarked, however, that, at present, nothing more is asked than that the metric system be adopted in connection with the apothecary's. Every physician knows that, except in reading or listening to the thoughts of other men, he may be almost absolutely independent of everyone else in his prescribing. We must also bear in mind the fact that it is one thing to attempt to change the familiar habits of thought of a whole people and a much less formidable affair to undertake a similar change in a comparatively small body of men whose average intelligence and progressiveness is much above that of the mass of the people.

2. It is said that the use of the metric system is liable to bring about errors, both in writing and in compounding prescriptions. As to the former, blunders depend more upon the carelessness of individuals than upon the peculiarities of any system of nomenclature or numeration. Aside from the danger of mistakes in dose that are as likely to occur under one system as under another, errors in writing the metric doses can occur only from misplacing figures with regard to the decimal point and from illegibility. The confusion of dram and ounce signs, the cutting off of X's into V's, and the running together of two I's into a V, are quite as great sources of error. The use of a ruled decimal line on prescription blanks is a safeguard against false alignment. As to the second danger, that of mistakes on the part of the druggist, I have found this quite an imaginary one in Buffalo. Most pharmacists are perfectly competent to fill metric prescriptions, and, throughout the country, the colleges of pharmacy are far more progressive than are the medical schools in requiring a theoretical and practical acquaintance with the metric system on the part of their students.

3. A gentleman who, from his official position, was required to use the metric system, and who, from personal prejudice, made this use a purely nominal one, offered this objection, that prescriptions written in the metric system would leave an empty space in the bottles prepared for a given number of ounces. This reminds me of the anecdote of the shoemaker who apologized for a pair of misfit boots on the ground that if the customer would cut off his corns, probably the boots would be a perfect fit. To this suggestion the customer replied that he did not propose to plane his feet to the dimensions of any pair of boots. I must confess the same kind of egotism in regard to my prescriptions; but even from the practical and common-place view, there is no reason for a misfit occurring between the prescription and the bottle. There are already on the market bottles graduated to a convenient number of cubic centimeters, and I am informed by a pharmacist that one hundred cubic centimeters, the usual twenty-dose mixture, is a proper amount for a four-ounce bottle, leaving no more space at the top than should be allowed for thorough shaking.

Your committee has, informally and without much attempt at thoroughness, canvassed the local profession, comprising some two hundred and fifty regular practitioners, to ascertain the number and influence of those who use the metric system of prescribing. We are personally acquainted with about fifteen who use this system to the exclusion of the other, except in rare instances when commercial reasons or the necessity of particular caution may indicate the use of the older terms. Quite a number of other physicians use the metric system to some extent, and there are many others who would gladly do so were it not that they hesitate to leave the beaten track. Your committee has estimated that about thirty thousand prescriptions are annually written in the metric system in the city of Buffalo. It is also, nominally, in exclusive use at the Buffalo General Hospital, and this use at times becomes actual, as well as nominal, according to the views of the visiting and the house staff. At the Fitch Dispensary about a fifth of the patients are prescribed for in the metric system. It is in use at the United States Marine Hospital Office and in the marine ward of the Sisters' Hospital, at the Buffalo Eye and Ear Infirmary, and in part at the Ingleside Home Hospital.

ORIGINAL LECTURE.

EMBOLISM OF THE LEFT CORONARY ARTERY; SUDDEN DEATH.[1]

BY LUDVIG HEKTOEN, M.D.,
PATHOLOGIST TO THE COOK COUNTY HOSPITAL, CHICAGO.

LADIES AND GENTLEMEN: The man whose body we are about to examine was thirty-two years old when he died suddenly, about sixteen hours ago. He was a carpenter by occupation, and had commenced his usual work yesterday morning, but he was soon obliged to stop; he was assisted to the sidewalk by two men, and, complaining of intense pain in the chest, he was placed

[1] Report of the post-mortem examination made before the class in the Cook County Hospital Dead-house, May 17, 1892.

in the police ambulance and hurried off to the hospital, on the way to which he died.

This is all of his history that is known.

Inspection shows a well-nourished, muscular man, without any marks of bodily violence; there is marked lividity of the posterior aspect of the body, extending up to and including the ears; rigor mortis is quite decided.

Internal examination. — The abdominal cavity is empty; the peritoneum is smooth and shining; there are firm adhesions around the spleen, and also between the gall-bladder and the hepatic flexure of the colon. The diaphragm reaches to the fifth rib on either side. The pericardium contains the usual quantity of clear, yellow fluid; it is quite smooth, but the epicardium is thickened and grayish in color over the greater surface of the heart, but not more so in the vicinity of the coronary vessels than elsewhere. Both pleural cavities are partially obliterated by quite firm adhesions, and contain no fluid. The right side of the heart contains a moderate quantity of dark-red, fluid blood; the left side is practically empty. The semilunar valves are quite competent to the water-test. The endocardium of the right heart is normal; the tricuspid orifice admits four or five finger-tips readily; the cavity of the right ventricle is 8 cm. deep, and its wall is 4 mm. thick. The endocardium of the left heart is also nearly normal, there being a few yellow areas in the anterior segment of the mitral valve, the free margins of which also appear to be a little thickened; the mitral orifice admits three finger-tips; the cavity of the left ventricle measures 8 cm. in depth, and the wall is 1 cm. in thickness. In the myocardium of both ventricles are seen small, white areas and streaks, scattered quite freely over every cut surface; there are no areas of softening. In the aorta there are a few yellowish-gray areas, of irregular outline and size, extending from the valves down to the diaphragm, and occupying in the thoracic aorta a strip about 5 cm. wide that includes the orifices of the intercostal arteries; there is no very marked thickening of the intima, the yellow areas being situated in its upper layers. At the origin of the large vessels at the root of the neck the intima presents distinct scars; situated upon the wall of the aorta, just above the junction of the anterior with the left posterior aortic leaflet, is a wart-like mass, measuring about 4 mm. in height and 3 mm. in diameter, that appears to be composed of fibrin; it is quite firmly adherent to the wall of the vessel, and is a parietal thrombus in the aorta. On slitting up the left coronary artery I come upon a quite firm, grayish, granular mass that completely occludes the lumen of the vessel, to the walls of which it is not adherent, lying just in front of the bifurcation of the artery at the commencement of the anterior inter-ventricular groove. This mass is, in all probability, an embolus that has lodged at the bifurcation of the left coronary artery.

In the coronary arteries are seen many areas of yellowish thickening in the intima, but none of these areas is rough or covered with thrombi, the lumen of the vessels being practically of normal size, except at the point mentioned, where it was completely obliterated.

The lungs are heavy and soggy, and contain much blood and frothy fluid.

The spleen presents a considerable area of thickening of its capsule; the area is 6 cm. long, 2 cm. wide, and at the thickest portion it is nearly 1 cm. in thickness; it is fibro-cartilaginous in consistence, and quite uniformly yellow on the cut surface. In the splenic substance, which is rather soft, but otherwise like the normal, are two areas that consists of caseous, granular material inclosed in a dense, measurably thick, homogeneous capsule; one of these areas measures one, the other one one-half cm. in diameter.

The left kidney is 12 by 6 by 3 cm. in size; the capsule peels readily; the surface is smooth and the cortical markings distinct on the cut section, the labyrinths presenting plainly visible and prominent glomeruli, because the latter contain much blood; the kidney is quite firm, and blood runs quite freely from the cut surface. The pelvis of the kidney is normal.

The right kidney is of about the same size as the left; the capsule peels quite readily; the surface is smooth, but presents numerous areas of a light-yellow color, of irregular outline and varying size; on section these areas are, in each instance, seen to correspond with anemic infarcts in the kidney. The kidney contains altogether eight distinct, wedge-shaped areas, which have a uniform, light-yellow color, are bloodless, have a red line at their periphery, the base of the wedge lying upon the surface of the kidney, the apex in the smaller infarcts being situated within the cortex, in the larger ones down in the columns of Bertini; the smallest infarct has a base measuring 3 mm.; the largest has a base measuring 2 cm. in greatest diameter. The kidney is otherwise quite normal.

The bladder, seminal vesicles, prostate gland, and testicles present no abnormality. The liver and the gall-bladder are also apparently normal. The mucous membrane of the stomach is covered with a viscid, grayish, turbid mucus; it presents many folds and elevations—so that in places it is almost distinctly nodular; the folds are not obliterated on stretching the muscular coat, and the gastric mucous membrane rises above the esophageal at their junction—it is consequently thickened. The pancreas is normal.

There is no fracture of the skull; the membranes are smooth and shining; there are no areas of thickening in the pia, which is not abnormally adherent. The ventricles are empty; there are no changes, no thrombi, no emboli in the vessels at the base, and after the usual section of the brain we cannot discover any foci of old or of recent softening.

The anatomic diagnosis will consequently read: Chronic deforming endarteritis of the aorta and coronary arteries; parietal thrombosis of the aorta; embolism of the left coronary artery; chronic fibrous myocarditis; anemic infarcts of the right kidney; congestion of the left kidney; chronic gastric catarrh; chronic fibrous perisplenitis and pericystitis; gummata (?) in the spleen; chronic pleuritis; pulmonary edema and congestion.

REMARKS.—It can be quite safely stated that our examination has demonstrated the cause of this man's death, namely, embolism of the left coronary artery. This would cause anemia of almost the entire left half of the heart; a collateral circulation could not be established, because the coronary arteries belong to the so-called terminal arteries, and death would consequently ensue from cardiac paralysis before any consecutive degenerative changes in the myocardium could have time to become

apparent. The source of the embolus was, undoubtedly, the thrombus in the aorta from which fibrinous masses might at any time have been washed away with the blood-current. The thrombus formed upon a rough spot, due to the degeneration and loss of substance incident to the extensive chronic endarteritis that was present in the commencement of aorta. From the same thrombus came also, in all probability, the emboli that, lodging in the branches of the right renal artery, gave rise to the formation of infarcts as described; the yellow wedges or areas are due to coagulation-necrosis following the anemia that was caused by the blocking of the renal arterial branches, which are also terminal arteries; each anemic infarct marks out the area nourished by the corresponding vessel peripherally from the seat of the obstruction by the embolus.

The edema and congestion of the lungs can, in this case, be easily explained by the weakness of the left ventricle, as compared with the right, during the last moments of life.

The hyperemia of the left kidney is to be looked upon as compensatory, the right kidney being rendered functionless to a considerable extent by the many areas of anemic necrosis.

The fibrous myocarditis resulted from the chronic disease of the coronary arteries, which, gradually reducing the nourishment of small areas of the heart-muscle, finally caused a complete degeneration of these spots and connective-tissue substitution.

The truth of the statement "that a man is only as old as his arteries" is shown indirectly by the findings in this case; had the patient not had atheromatous patches in his aorta, the thrombosis and secondary embolism need not have resulted. Not knowing anything about the man's history, we cannot form any definite idea as to the etiology of the endarteritis; we cannot say whether it is an instance of the not uncommon, prematurely early involutional degeneration, the man being only thirty-two years old, or is due to some of the causes usually mentioned in connection with this disease, such as lead, alcohol, overwork, or syphilis. We can say that it is not secondary to renal disease, because the kidneys were found quite healthy, with the exception of recent infarcts; alcoholism, syphilis, and other causes cannot, however, be excluded, and whether, with regard to syphilis, actual evidences of this disease were present or not, in the shape of the possible gummatous areas in the spleen, cannot be definitely settled without a microscopic examination.

Finally, remember that we have here an excellent illustration of death due to blocking of a coronary artery—one of the most common causes of sudden death. The blocking may, as in this case, be due to embolism; it may be due to thrombosis secondary to chronic disease of the coronary arteries, or it may be due to occlusion of the orifice of one or both of the coronary arteries in the aorta by atheroma in this vessel, with or without the formation of a thrombus at the very orifice. The latter mode of obstruction was well illustrated in a man, thirty-five years old, who died suddenly in the street, and whose body I examined a few days ago. All the organs were found to be apparently quite normal, except the aorta, which was atheromatous down to the iliac arteries; just at its very commencement the process was most extensive, resulting in the formation of a grayish, raised, annular area, 1 cm. broad, involving the coronary orifices, which were only as large as pin-points; the left was occluded by a small thrombus hanging over the opening. In this case the coronary arteries themselves were not diseased, and the myocardium was quite healthy, but pale-grayish in color.

In all cases of sudden death that come up for medico-legal investigation the coronary arteries should invariably be thoroughly and completely examined.

119 LOOMIS STREET.

NEW DEVICES.

TREATMENT OF CRUTCH-PARALYSIS.

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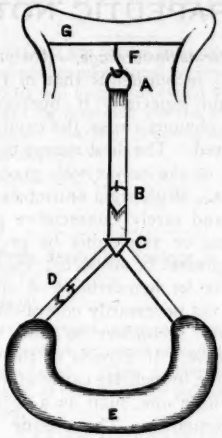
AMONG the unfortunate possibilities attending the use of a crutch, whether on account of a sprain, fracture, disease of joint or bone, or again, on account of a want of power in some muscles, is crutch-paralysis. For this, speedy cure can usually be obtained by rest; but too often the patient feels that he cannot rest, and sometimes the crutch, resumed after a rest, again causes paralysis. In prophylaxis, care in the selection of a crutch counts for much.

Krafft-Ebing[1] long ago pointed out that paralysis from this cause much less frequently occurs when the crutch is well-padded and has a grip so placed that when taken by the hand the arm is nearly straight. It is a not less important precaution to see that the crutch is sufficiently long, so that the body does not bend forward and rest on the great pectoral muscle exclusively. I have seen at least one case recover from the paralysis, with no other treatment than the exchange of too short crutches for a fit pair. With all care, however, paralysis sometimes comes on, or rather the ominous tingling of the fingers and slight weakness of grasp appear, and other means of treatment must be adopted. The cause of the paralysis is obvious: the body rests too heavily on the crutch, and the crutch presses too severely on the nerves. This is shown by the fact that the misfortune is more likely to occur in fat, elderly persons, and is exceedingly rare in children, though in these it does sometimes occur. If the body could be lifted partly from the support no injury to the nerves could occur. At the request of Dr. W. N. Bullard, of Boston, I sought a means of mechanical treatment, and I found the following practicable:

A perineal strap (E) is applied and fastened by a buckle (D) in front, so that the angle (C), at which the ends of the strap come together, shall be just above the crest of the ilium. At this angle (C) is a metallic triangle or ring, from the upper part of which ascends a suspensory strap of a length regulated by a buckle (B) to a ring (A). The perineal strap and the lower part of the suspensory strap (A C) go outside the underclothes and inside the outer clothes, but at the waist the upper strap passes, in women, outside all the clothes, while in men it is conducted under the waistcoast to the arm-hole, and out at that point. The upper ring (A) is then caught on a hook (F) screwed into the axillary bar (G) of the crutch. If

[1] Krafft-Ebing: "Krückenlähmung," Deutsche Archiv f. klin. Med., Bd. ix, 1872.

a pair of crutches is necessary, two perineal pads may be applied; if a single crutch is sufficient, one pad will give enough support. The suspensory straps must be buckled like suspenders at such a length that when the crutches



are in position, and the rings attached to the hooks, the axillæ feel no pressure, and the body rests on the perineal bands. When the patient sits, the ring can be removed in an instant from the hook and the crutch put aside, and when the patient again takes the crutch, placing the ring on the hook is also only momentary. All the straps must be inelastic, and may be made of either leather or webbing; if the latter, an inch is a good width. A large part of the success of the apparatus depends on the comfort of the perineal strap. This, when padded, should be large, smooth, and firm. One of the best of such straps is made of chamois skin stuffed with cork-dust; a cheaper form is made of canton flannel sewed into the shape of a sausage about a leather or webbing core.

A more complex pad that can be made comfortable for any one is that devised by Brackett,[1] which is usually made of leather lined with felt. Whatever form is used, the padded portion must be so long that no part of the seat is unprotected; any greater length is clumsy. Comfortable as the apparatus is when properly made, it is a trial to the patients who have to wear t, but it does, as I have found in four cases, accomplish its work; it keeps pressure from the axillary nerves, and insures speedy recovery.

70 WEST ELEVENTH STREET, NEW YORK.

A SIMPLE BOTTLE INHALER.

BY W. SCHEPPEGRELL, A.M., M.D.,
CLINICAL ASSISTANT TO NEW ORLEANS EYE, EAR, NOSE, AND THROAT HOSPITAL.

REALIZING the importance of medicated vapors in connection with the treatment of diseases of the lungs and respiratory passages, I have endeavored to devise an inhaler that, while effective, durable, and not likely to get out of order, could still be sold at a reasonable price.

The cheap inhalers are usually of little value, and the more costly ones are beyond the means of the poorer class of patients.

The device represented in the accompanying illustration fulfils the indications of an efficacious inhaler, and, on account of the simplicity of its mechanism, can be sold at a small cost. It is made for me by Messrs. Eimer & Amend, of New York.

It consists of a one-pint flask, closed by a rubber stopper having two perforations. In one of the perforations is passed a funnel tube to within a quarter of an inch of the bottom of the flask. Into the other perforation is passed another glass tube, one extremity of which extends an inch into the flask, the other extremity being bent at angle convenient for application.

For use, the flask is filled one-third with water or other diluent, warmed when advisable. The medicament, as tincture of iodine or eucalyptol, may then be dropped in sufficient proportion through the funnel tube. The patient then places the bent extremity of the tube in his mouth and inhales the air medicated by its passage through the solution in the flask.

When the solution loses its strength, additional medicament may be dropped into it through the funnel tube.

When it is desired that the mucous membrane of the nose and naso-pharynx should be also treated by the medicated vapor, a rubber tube and nose-piece may be attached to the glass tube of the inhaler, and the inhalations made through the nostril, to which the nose-piece of the inhaler is applied.

I have for some time, with much satisfaction, used inhalers like that described.

271 CARONDELET STREET.

[1] Orthopedic Surgery, Bradford and Lovett, p. 312.

MEDICAL PROGRESS.

Pachydermia Verrucosa Laryngis.—MEYER (*Bertin. klin. Wochenschr.*, No. 19, 1892, p. 454) has reported two cases of pachydermia verrucosa laryngis successfully treated by gradual excision. One was that of a man, fifty-three years old, who for two years had been hoarse, and for three months had suffered with marked and progressively increasing dyspnea. The right half of the larynx was found occupied by a chalky-white tumor, of cauliflower appearance and hard consistence,

extending beyond the median line and obstructing the view of the deeper parts of the larynx. The growth apparently originated from the ventricle. There was neither history nor evidence of syphilis or of tuberculosis. The nutrition was maintained. From the fetor of the breath, from the size, appearance, and origin of the tumor, from the age of the patient, a diagnosis of carcinoma was reached. Examination of a bit of tissue removed failed, however, to disclose the histologic structure of carcinoma, and the removal of the growth by the natural passages was decided upon. This was accomplished piecemeal in ten sittings. A small growth recurred; this was removed; the patient thereafter remained free. Histologically it was found that beneath a thick layer of epithelium was a connective-tissue stroma, sending papillary processes toward the surface; between these dipped epithelial processes; the lowest layer of epithelium consisted of fairly high cells, presenting here and there indications of division; toward the surface the cells were flatter, the uppermost layers being constituted of horny pavement epithelium. In the second case, in a man twenty-six years old, the symptoms had existed for eight years. The galvano-cautery had been employed with excellent results. The patient presented atrophic rhino-pharyngitis. The posterior wall of the larynx presented a hemispherical, grayish-white thickening, projecting for a distance of about a quarter of an inch into the larynx. The right vocal band, at its posterior third, was the seat of a pale-red, bean-shaped tumor, resembling the mass on the posterior wall of the larynx. Below the bands were several tumors of the same kind. A view of the left band was obscured by the mass on the posterior wall, but at the level of the ventricle a reddish prominence could be seen, on inspiration reaching almost to the middle line, and on phonation reaching still further to the right. The vocal band itself was thickened and posteriorly presented a depression into which the tumor of the right band projected. The subglottic mucous membrane was thickened. From the multiplicity of the growths, their circumscription, the absence of glandular involvement, the well-preserved nutrition, the age of the patient, together with the absence of evidence and history of syphilis and tuberculosis, a diagnosis of pachydermia verrucosa was made, and this was confirmed by subsequent microscopic examination. The administration of potassium iodide was followed by little change, so that by means of cutting-forceps the neoplastic growths were removed, a little at a time, until finally the patient was considered cured.

Incipient Posterior Spinal Sclerosis in a Case of Exophthalmic Goiter.—WIENER (*Inaugural Dissertation*, Berlin, 1891) has reported the case of a woman, twenty-two years old, who, for four months following childbirth, presented general nervous irritability, restlessness, palpitation of the heart, and itching of the skin. At the twelfth year of age, one foot was dragged for a period of time. Later there was anemia, which was relieved by treatment with iron. The patient was emaciated and anemic; the pulse was 130; the left ventricle was hypertrophied and dilated; the thyroid gland was enlarged; the eyes protruded; convergence was defective; the visual field was limited; the hands were hot and moist; sensibility to pain was diminished; the knee-jerks were wanting; attacks of vertigo occurred; memory was impaired; there was slight headache.—*Centralbl. f. klin. Medicin.*, No. 29, p. 611.

THERAPEUTIC NOTES.

Treatment of Uterine Hemorrhage.—ROUTH (*Practitioner*, July, 1892, p. 5) recommends that in case of profuse menorrhagia, and especially if metrorrhagia is also present, without obvious cause, the cavity of the uterus should be explored. The best means of exploration is rapid dilatation of the cervix with graduated bougies, under anesthesia. With rigid antisepsis there is practically no risk and rarely consecutive pyrexia, unless malignant disease or salpingitis be present. Even if tubal disease is present or suspected, exploratory dilatation of the cervix for hemorrhage of apparently intra-uterine origin is not necessarily contra-indicated, salpingitis often being secondary to and aggravated by intra-uterine disease. If fibroids of the uterus are evidently present, the immediate cause of the hemorrhage may be a removable one, such as a coëxisting polypus or fungous endometritis. The uterine cavity should, therefore, when practicable, be explored before removal of the appendages or hysterectomy is considered. In some cases dilatation alone suffices to relieve hemorrhage and pain. If exploratory dilatation were more commonly adopted prior to the employment of Apostoli's treatment, it would lead to a more exact knowledge of the applicability of the latter and place its use on a more scientific basis.

Recovery from Twenty Grains of Strychnine.—WALLACE and MCRAE (*British Medical Journal*, No. 1647, p. 179) have reported the case of a man, sixty-five years old, who was seen some seven or ten minutes after the ingestion of twenty grains of strychnine sulphate. Apomorphine, gr. $\frac{1}{5}$, was given hypodermatically; six tumblers of hot water, with three tablespoonfuls of mustard and three tablespoonfuls of salt, were administered by the mouth. Three ounces of tannic acid were likewise given, and the stomach was washed out by means of the stomach-pump. Finally a large dose of potassium bromide and thirty grains of chloral were given and strict quiet and absence of light and movement enjoined. There were twitchings and jerkings of the muscles of the limbs and tetanic spasms of the muscles of the lower jaw, with violent contractions of the esophagus. Emesis was prompt and energetic, and the man recovered.

Abortive Treatment of Erysipelas.—TALAMON (*Münchener medicin. Wochenschrift*, 1892, No. 28, p. 501) recommends the employment of a spray of sublimated ether (1 : 100) in the treatment of some cases of erysipelas. If the infiltration be not extensive, application is to be continued until vesication occurs; if the involvement be extensive, the central portion is only to be moistened; as the periphery is reached, the application is to be more vigorous and should extend beyond the line of demarcation. But few applications are necessary. If the eyelids are involved, they should be covered with moist borated compresses.

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SATURDAY, AUGUST 20, 1892.

THE TREATMENT OF PNEUMONIA.

SCARCELY any subject in the domain of practical medicine has been more discussed, and yet remains as unsettled, as the treatment of pneumonia. Changing views of pathology are responsible for much of the discrepancy of views upon the subject. In the olden days, as a matter of course, inflammation of the lung was treated by blood-letting and mercury. Antimony, too, had its vogue. With the reaction against venesection and the mercurials, and with the earlier advances in pathology, responsible for so much therapeutic nihilism, the expectant treatment was largely taught—and perhaps practised.

Drugging, however, was not entirely given up even when mercurials and bleeding were abandoned. Aconite, veratrum viride, and digitalis, widely differing in physiologic action, have in turn been strenuously urged for their influence upon the heart and circulation, in the attempt to overcome or compensate for the obstruction to the passage of blood through the hepatized lung.

With the acceptance of the germ-theory of disease and the discovery of the pneumonia-coccus apparently establishing the previously suspected infectiousness of pneumonia, the antiphlogistic methods of treatment, both old and new, have once more been discouraged; yet out of all the tumult a powerful voice is here and there still raised in strenuous advocacy of the lancet. We need but refer to DR. HIRAM CORSON, whose latest utterance took the shape of a paper recently read before the Philadelphia County Medical Society. As was well said by one of the speakers at the meeting in question, we must carefully discriminate among our patients. Whether or not there are actually different types of the disease, there certainly are many differences in the physical state and environment of those attacked by it, and a treatment that serves a good purpose in a given case, under certain conditions, may be worse than useless in another case, under different conditions.

Thus, the question as to the propriety of bleeding in pneumonia is one to which an invariable answer cannot be given. In a robust patient, at the very outset of the case, bleeding may cut short the progress of the disease; or again, when, during the progress of a case, a patient, robust or weak, is suffering from the mechanical consequences of obstruction to the free passage of blood through his pulmonary vessels, and the heart is over-distended and laboring ineffectually, depletion may have a beneficial effect by diminishing the amount, and to that extent favor a more equable distribution of blood in the body, and relieve the heart of a portion of its load. The loss of blood under these conditions cannot injure the patient, because, being stagnant and overloaded with toxic products, the blood has ceased to be either nutrient or energizing. The very removal from the circulation of a quantity of vitiated fluid may diminish the adverse influences against which the powers of recovery have to contend.

Under such circumstances, the administration of digitalis as a substitute for venesection would be futile. That which the therapeutist has to remedy is not a lack of power in the heart, but the conditions against which the heart is compelled to labor. Similarly, at this stage, the administration of the nitrites cannot replace venesection, but used earlier, intelligently, and vigorously, the use of the nitrites may prevent the occurrence of the conditions demanding venesection.

The time for the administration of aconite in the treatment of pneumonia is before consolidation has occurred; the indication is the same as for early venesection, and, used in this way, aconite is not unworthy of the name applied to it of the "therapeutic lancet." Unfortunately, however, cases are

not often seen at the stage at which aconite is most likely to be beneficial, and there is a time, which the practitioner of experience and judgment can recognize, when venesection will cut short the progress of the disease and aconite will not.

What are the indications for digitalis? These cannot be stated simply, for the problem is a complicated one. In certain patients and at certain stages of the varying progress of the case, a condition may be recognized in which the slowing of the rate of cardiac contraction, the heightening of blood-pressure, and the increased vigor of the systole, brought about by this drug, will insure a more equable distribution of the blood through the healthy portions of the lung and throughout the systemic circuit, thus practically permitting a cessation of function on the part of the diseased portion of the lung, but allowing the general physiologic processes of the rest of the body to go on with a minimum of disturbance. Again, it is only by experience and judgment, and familiarity with clinical indications gained by bedside study under the direction of an experienced preceptor, that this condition can be recognized.

Of veratrum viride we cannot speak with assurance, for we have no experience with it. It seems, however, to occupy a place midway between aconite and digitalis, but positive statements as to its value, and the conditions under which it should be used, must be left to those familiar with its action.

The ammonium salts play an important part in the treatment of pneumonia. The absence of chlorides from the urine, the well-known function of sodium chloride in preserving the fluidity of the blood-serum, the tendency to excessive fibrinous exudation, and to the formation of thrombi, characteristic of pneumonia, combine to give a therapeutic indication almost unmistakable. The fluidity of the blood must be maintained, and the most effective agents to this end are the ammonium salts. Three of these have special indications. Ammonium carbonate stimulates the heart as well as the respiration, and has a special value in what may be called the middle stages of pneumonia. Ammonium chloride, on account of the much larger doses in which it may be used, and possibly because it is a chlorine compound, is to be preferred in the earlier stages, when this special use of the carbonate is not necessary. Ammonium salicylate is of special utility as an antiseptic, and appears to exercise a peculiarly beneficial influence over the progress of those cases of pneumonia in which associated pleuritis is of notable extent.

In many cases the combination of ammonium carbonate, ammonium chloride, and, if the stomach will bear it, ammonium salicylate, has seemed to be of greater value than any one of the drugs alone.

The value of quinine in pneumonia is a question by no means settled. The weight of opinion is against its use, and yet there are many cases in which it seems to be beneficial. When a case is seen in its incipiency, the use of massive doses of quinine, so that forty or fifty grains are given in the course of twelve hours, is justifiable in the attempt to abort the disease. While the possibility of such abortion must always remain doubtful to those who insist that the diagnosis can only be made by symptoms that appear later in the pathologic course of the disease, there are not wanting those who claim to have observed cases of pneumonia aborted by such treatment.

External applications are sometimes of apparent benefit, though possibly more by equalizing the temperature and protecting the chest from drafts than from any direct or indirect influence upon the morbid process. Turpentine stupes and embrocations probably do more good by the collateral inhalation of turpentine vapor that attends their employment, than by the counter-irritation produced.

As a matter of course, the excretions are to be actively maintained.

Subcutaneous infusion (hypodermatoklysis) of saline solutions, as practised by F. P. HENRY, of Philadelphia, is unquestionably useful, probably by helping to maintain the fluidity of the blood in the same manner as the internal administration of ammonium salts, and by washing out noxious matters.

The inhalation of oxygen, while in no sense a curative measure, has its place in the management of a case of pneumonia, in the hope of keeping the patient alive until the morbid process has completed its course. The *rationale* seems to be that it supplies concentrated respiratory pabulum, thus compensating to some degree for the loss of aërating surface.

Under the stimulus of recent researches by BEHRING, the KLEMPERERS, KITASATO, and others into the natural processes of immunity and cure, a specific treatment of pneumonia has been proposed and practised, which offers a most encouraging prospect.

The lesions and untoward symptoms of the disease being attributed to a pneumotoxine resulting from the active invading microbe, natural recovery is held to depend upon the production of an antagonistic substance (anti-pneumotoxine) in the serum of the invaded animal. Thus NEISSER (*Deutsche med. Wochenshr.*, No. 25, p. 593; THE MEDICAL NEWS, July 23, 1892) has reported three cases of recovery of pneumonic patients treated by means of intra-venous injection of blood-serum obtained from convalescents two days after the crisis had occurred.

G. KLEMPERER (*Beiläge zum Centralbl. für klin. Medicin*, 1892, No. 25, p. 41) reports twelve cases treated with injections of the serum of highly immunified guinea-pigs. In five of these the crisis took place soon after injection. In the remaining seven subsidence of temperature and slowing of pulse and respiration followed. Eight cases were treated with injections of a concentrated culture of pneumonia-cocci heated to 60° C. By this means the organism is supplied with the immunifying substances, from which it develops the curative factor. In all eight cases the temperature declined by lysis, the fall beginning from twelve to twenty-four hours after the injection.

In one case recently treated at the Philadelphia Hospital the experiment has seemed to be successful. The technique is simple, the only requisite being complete sterilization of vessels and tubes, and the complete defibrinization of the blood presumably containing the antitoxine.

DISPARAGEMENT OF OUR PROFESSIONAL ANCESTORS.

THE following statement is found in an editorial in a recent issue of an American medical journal: "A hundred years or so ago our ranks were composed mainly of quacks and of impractical dreamers." Apparently this assertion is intended to apply to the profession not of this country only, but in general. Whatever the author's purpose, the remark will be considered by us as relating exclusively to American physicians. We question its truth for reasons that will now be presented.

Many of the practitioners of medicine in this country during the eighteenth century were educated in the best schools of the Old World before coming to the Colonies; many others who began their studies here completed them in famous institutions in Great Britain, or upon the Continent; and still others, born here, had their entire medical education abroad.

More than a hundred years ago, a successful medical school was in operation in Philadelphia, and one in New York, both established before the Revolution.

If the names upon the roll of medical teachers of "a hundred years or so ago" be compared with the names upon the roll of medical teachers of to-day, it will be found that there were quite as famous and able men then as now. Such a comparison will do no discredit to the men of the last century.

In the early days of medical teaching in this country the candidate for graduation was required to write a Latin thesis, and, from an examination[1] of some of these that we made a few years ago, it was evident that the authors had been carefully and capably instructed in Latin composition. These men had the mental discipline and the liberal culture that thorough study of the ancient classics gives. Here we beg leave to remark that we trust the day is distant when such studies shall be cast aside by those who are preparing to study medicine, sole attention being given to learning the physical sciences. However this may be, does it seem probable that students thus educated, "a hundred years or so ago," would be "quacks" and "impractical dreamers?" Would not the influence of such men rather have a strong tendency to elevate the profession? Is it probable, nay, even possible, that with such teachers and pupils there could be the condition described in the editorial we have quoted? To ask is to answer.

The times that immediately preceded the Declaration of Independence and which marked the Revolutionary struggle and the establishment of our system of government, were not favorable for "quacks and impractical dreamers" in any department of human effort.

If one recalls some of the illustrious names in the American medical profession in the eighteenth century—many of them those of great teachers, of eminent surgeons and practitioners of medicine, and observers and original contributors to professional

[1] One of the theses was by Dr. William Elmer, of Bridgeton, N. J., who became an eminent practitioner, and was also known as a patriot and a member of the United States Congress. It is an interesting fact that of Dr. Elmer's descendants, at least one in each generation up to the present time has been an honored member of the medical profession. Now, we believe, there are three.

knowledge—he will find that there were brave men before AGAMEMNON. The names of such men as the BARDS, BAYNHAM, BOYLSTON, BOND, CADWALLADER, CLAYTON, CRAIK, DORSEY, GRIFFITTS, PRESCOTT, REDMAN, ROMAYNE, SHIPPEN, TILTON, the WARRENS, HUGH WILLIAMSON, CASPAR WISTAR, above all in ability and fame, BENJAMIN RUSH, these, and more whose names might be given, can only be mentioned with reverent honor. Some of them were well known, not only in the profession, but also in council and in the field, assisting alike in the struggle for independence and in laying the foundations and erecting the superstructure of our national government. No man has occupied a larger place in American medical history than RUSH. CASPAR WISTAR was not only an accomplished anatomist, but an excellent teacher of anatomy and clinical instructor. It is doubtful if Philadelphia has now his equal, as certainly the entire country has not produced the peer of RUSH in medicine.

"A hundred years or so ago" there were several other great medical teachers, whose fame is part of the honor of the American profession. The motto of one of the oldest of English families is *Non generant aquilæ columbas;* and so such men as we have mentioned, whether teachers or practitioners, men who were neither "quacks" nor "impractical dreamers," did not produce a race of doctors materially differing from themselves.

Recognizing the important advances in medicine, especially in its scientific character, and remembering that humility is characteristic of true knowledge, we ought to beware alike of exalting our own attainments and of disparaging those of our medical ancestors. It is probable that the contrast between the profession as it now is, and as it will be a hundred years hence, will be greater than is that between the former and the profession as it was a hundred years ago.

SELECTION.

HIGHER MEDICAL EDUCATION.

WHY is it that admission to the profession of medicine in Massachusetts is at a disadvantage compared with admission to the profession of law? The very last thing the Law School or the Law Faculty would desire would be that their degree should admit to the bar. Other institutions have worked that out most thoroughly. Take, for instance, the school of law which is connected with Columbia College. It was demonstrated beyond a doubt that the fact that the law degree of Columbia admitted to the bar was a clear disadvantage to the school and to the profession. It is a clear disadvantage in medical education that the degree given by a faculty, a teaching faculty, should admit to the profession. The standard should always be outside, determined by another power.

Why is it that a full professor's salary in the Medical School of Harvard University—I mean for gentlemen who give all their time to the school, not the gentlemen who are in clinical or surgical chairs—why is it that the salary of a full professor giving his whole time in the Medical School is lower than in any other department of the university? Is this as it should be? That is the simple fact, it is lower; it is a good deal lower, than it is in the other departments of the university. Here is a point on which change should be promptly effected, that it is not fitting that the services of medical teachers should be so much lower than the services of other professional teachers in the same university. At best the scale of salaries for full professors in Harvard University is lower than in many other institutions, but in our Medical School we have the lowest full professor's salary. The gentlemen who serve in those chairs are not of less ability than those that serve us in law or in divinity or in the arts and sciences. They are not of less devotion.

All hangs on our English inheritances on this subject. In England the profession of medicine, the profession of surgery, does not now to-day stand on a level with the other learned professions. This is not the case on the Continent; it is conspicuously the case in England at this moment. They have the inheritance of the barber and the barber-surgeon still in their minds in England, and we have inherited two things from England, a lower standard of general education in the medical profession, the lower standard of requirement for admission to that profession or admission to the studies of the profession, and we have inherited this lower rate of compensation. I wish we could attach ourselves to the Continental schools of medicine rather than to the English in these regards. We have already far surpassed our English brethren in procuring for the medical and surgical practitioner the right standing in the community, in procuring for the medical and surgical practitioner the same standing which the lawyer or the preacher or the teacher holds; but we have something still to do with regard to the scale of instruction, previous training, required for admission to medical schools; and we have something still to do in the medical schools themselves in putting them on the right and equal basis of endowment which other professional schools, the schools of other professions, have already established for themselves.

The progress in medical education in our own university and in the other universities of the land made during the last twenty years, seems to me to be the most considerable progress that has been effected in any department of professional education within the same period. It is simply marvellous. When I look back on what was required of the medical school before the year 1870, not only in our own school but in many other schools, and compare it with what is required to-day, I see a progress which cannot be met in any other department of education, and I know that for that progress we are indebted largely to the prevailing sentiment in the medical profession. The Harvard Medical School would never have been able to carry out its changes of 1870–71—changes which reduced by nearly 40 per cent.

the number of students in the school, if it had not been for the support received through the expressed public opinion of medical men; and I believe that the change which is now before us, the change to the four-year course, will require the same kind of steady and enthusiastic support.—PRESIDENT ELIOT, *Boston Medical and Surgical Reporter.*

REVIEWS.

DISEASES OF THE URINARY APPARATUS: PHLEGMASIC AFFECTIONS. By JOHN W. S. GOULEY, M.D., Sen. Surgeon to the Bellevue Hospital. 8vo., pp. 353. New York: D. Appleton & Co., 1892.

THIS interesting volume consists of a republication and revision of the first part of a series of twelve lectures, which were delivered during the autumn of 1891, and subsequently published in the *New York Medical Journal.* They are offered by the author in this revised book form as a contribution to the pathology and treatment of a class of diseases the gravity and frequency of which render them worthy of the closest study.

Dr. Gouley is not an advocate of the operation of cystotomy, infrapubic or suprapubic, for the cure of obstinate cystitis with contraction of the muscular coat of the bladder. His method of treating such cases is by hydraulic dilatation of the bladder. The fluid used in irrigation is heated to a temperature of from 105° to 110° F., and injected into the viscus very slowly, one, two, or three ounces at a time, until a pint is used. This process is repeated once daily until eight, ten, or twelve ounces can be injected at once.

Dr. Gouley believes that a cystotomy may be of advantage as preparatory and adjuvant to hydraulic dilatation of the bladder, but without the latter the cystotomy will not effect a permanent cure.

The abortive treatment of urethritis is strongly condemned, as it should be. Dr. Gouley states that this supposed quick way of curing this complaint is as delusive as it is alluring, both to patients and physicians, for it seldom cuts short an attack, and, besides the great distress it causes, is often productive of grave effects upon the urethra and adjacent parts.

A brief outline of Dr. Gouley's views upon the subject of urethritis may prove of interest to our readers, as they differ somewhat from those of other authorities:

"1. There is no specific for urethritis, notwithstanding the popular belief in its existence.

"2. Urethritis cannot rationally be dealt with as a single phlegmasic entity, no matter what may be its cause.

"3. The treatment that is best suited to one type or stage of urethritis is often hurtful in another type or stage of the affection.

"4. Balsamics are contra-indicated during the first three stages of urethritis, and should not be administered until the fourth, or stage of decline, is fully established.

"5. Urethral injections are contra-indicated during the second and third stages, but may be used in the first stage and toward the close of the fourth stage.

"6. Injections of strong solution of nitrate of silver, or of strong solutions of any kind, are contra-indicated in all stages of urethritis.

"7. Urethritis is ordinarily too much and too vigorously treated. The more heroic and meddlesome the treatment, the greater the liability to accidents and complications, and the longer its duration.

"8. Confirmed acute contagious urethritis, under the most favorable circumstances and the most judicious treatment, rarely gets well in less than four weeks, except, of course, in the first attack in young and otherwise healthy men who are not over-treated. In the last-named cases it sometimes gets well in ten days or two weeks without medicinal treatment.

"9. Proper hygienic management is all-important in the treatment of urethritis; unless it is rigorously carried out, the medical and local treatments inevitably fail."

With this somewhat cursory review of an entertaining volume we would add our friendly criticism: the author has, in many instances, made use of a nomenclature that could have been improved by the employment of terms in more common usage. With this single criticism, the work may be heartily recommended.

TREATISE ON GYNECOLOGY, MEDICAL AND SURGICAL. By S. POZZI, M.D., Professeur Agrégé à la Faculté de Médecine; Chirurgien de l'Hôpital Lourcine-Pascal, Paris; Honorary Fellow of the American Gynecological Society. Translated from the French Edition under the supervision of, and with additions, by BROOKS H. WELLS, M.D., Lecturer on Gynecology at the New York Polyclinic; Fellow of the New York Obstetrical Society, and the New York Academy of Medicine. Two volumes. New York: William Wood & Co., 1892.

THE appearance of this book marks a new era in the development of gynecology. The author has devoted much elaborate study to the pathology of the conditions that lie at the basis of the various affections. Hitherto the subject of etiology has been treated on the most general principles, and all attention has been given to technique and those disputed questions of treatment that might have been more readily solved had the exact pathology been more clearly recognized. Assuming this principle (the importance of underlying pathologic conditions), the author has clearly defined the indications for treatment. In endometritis he has demonstrated the causal relation of microbic infection to the pathologic condition. He shows that in the genital canal there is a zone rich in microörganisms, which, after Winter, he calls the Dangerous Zone. Infection of the endometrium depends upon one of two processes: First, the penetration into the uterus and noxious influence upon the endometrium of the germs normally present in this zone, occurring from lack of resistance arising from general debility of the tissues, which reduces cellular vitality; second, upon the introduction of these germs into the cavity of the uterus by careless therapeutic procedures. This theory opens a wide field, in which gonorrheal and puerperal infection also figure.

As a result of these conclusions the author advocates: First, the utmost care in antiseptic precautions; second, active principles of treatment, shown especially in his recommendation of the curette.

The work is thoroughly abreast of the times in the subject of operative treatment, both as to indications and technique. In regard to the latter, the illustrations

in Volume I, in connection with methods of suture and hemostasis, and in Volume II, in connection with the treatment of fibrous tumors of abdominal evolution, and laceration of the perineum, should be especially consulted.

The care that has been devoted to classification should meet with the utmost appreciation from all who are interested in this subject, especially as shown in the division of salpingitis into inflammation without and that with cystic tumor. This classification sharply defines the indications for and against operative treatment.

The publishers deserve great credit for the arrangement and appearance of the volumes; the translator for his skill and faithfulness.

APPENDICITE ET PÉRITYPHLITE. Par CH. TALAMON, Médecin de l'Hôpital de Tenon. Small 8vo, pp. 248. Paris: Rueff et Cie., 1892.

THIS is the fourth of the series of little volumes by standard authors issued under the direction of Charcot and Debove. The subject of appendicitis is presented in an intelligent and conservative manner, and a careful reading will illuminate many obscure points appertaining to a pathologic condition, the real significance of which has only recently been recognized. While it is admitted that the cecum may be involved in various inflammatory processes, it is contended that these are never confined exclusively to that portion of the intestine, and that the symptoms occasioned form but a part, and a subordinate part, of the clinical picture. The classical train of symptoms hitherto known under the name of typhlitis is in all cases ascribed to an inflammation of the vermiform appendix. The work deals successively with the historical aspect of the subject, the lesions, the causes, the symptoms, the diagnosis, and the treatment. For therapeutic purposes cases are classified as medical and surgical. The former group includes cases in which the inflammation is confined to the walls of the appendix, or by extension involves but a circumscribed area of the adjacent peritoneum. If there be colicky pains, local and general sedatives are indicated, to be followed by an emollient enema. If evidences of inflammation are conspicuous, a dozen leeches should be applied at the seat of greatest pain, after which a gentle laxative, such as calomel or castor oil, may be administered. Subsequently, intestinal antisepsis is to be secured by irrigation and the administration of drugs by the mouth. If the peritoneum has become locally involved, an ointment of mercury and opium may find useful application. When the appendix has been perforated, with resulting general peritonitis, or peri-appendicular suppuration, surgical intervention becomes necessary. This should be undertaken as soon as it is recognized that the peritonitis is general. If the peritonitis is acute and circumscribed, operation should not be performed before the fifth day, while the best time for operation is between the eighth and twelfth days. In subacute cases incision is indicated as soon as the presence of pus is recognized.

Dr. J. H. McMillan, a graduate of the University of Pennsylvania in 1888, and a former resident physician in the Philadelphia Hospital, died of appendicitis at St. Louis, July 25, 1892.

CORRESPONDENCE.

NEW YORK.

The Board of Health—Sterilized Milk for the Poor—Skin-grafting—Tumors of the Bladder—St. Luke's Hospital.

ABOUT the only stir in medical circles of late has been due to the changes in the Board of Health. As some of your readers may already be aware, the "shaking up" in our police department was speedily followed by a number of important changes in the Health Board, which were of such a nature as to give color to the accusation that they were made chiefly for political reasons. Although it would be no surprise to many to learn that even this department, which is charged solely with looking after the health of our city, is tainted with politics, we have not heretofore been permitted to see so plainly the hand of the "boss," though his influence may have been none the less certainly felt. Here, as elsewhere, it is all-important to be possessed of a "pull," and one's tenure of office, as well as one's chances of promotion, bear a close relation to the strength of this hidden power. I have known one of the physicians connected with the Board to be deprived of his position without any charge of incompetency or neglect of duty, and in a few weeks to be reinstated through the influence which he was able to bring to bear upon the Board; yet in obedience to the demands of a more powerful but equally mysterious power, he was again displaced after a few weeks. The recent resignations, therefore, of such men as Drs. A. Jacobi and T. Mitchell Prudden may be looked upon as well-grounded protests against the methods pursued in the Board of Health. It is but natural that certain other medical gentlemen connected with the Board, who have been interviewed by the newspaper reporters, should not be anxious to make positive statements in regard to political interference, but it is noticeable that they do not deny its probable existence. It is bad enough that medical men in the employ of the city should, as a rule, receive so much smaller salaries than the legal gentlemen in the public service, but it is going altogether too far to allow these offices to be traded for votes. There is, indeed, good cause for apprehension when those who are entrusted with the important duty of attending to the sanitary condition of this large city are selected chiefly with a view to their qualifications as political leaders in their respective election districts. It is to be hoped that when this subject comes before the Academy of Medicine next fall, as it must do, it will receive the thoughtful and manly consideration which it deserves.

At this season of the year there is always more than usual interest taken in all matters pertaining to milk and to infant-feeding in general. Last summer, one or two of the larger dispensaries made an attempt to furnish sterilized milk to the poor, and, while there were many obstacles in the way of the success of this movement, the same institutions have felt sufficiently encouraged with their first experiment to warrant them in repeating it this season. On first thought, this would seem to be a very important and practical charity, and one quite easy to carry out, but experience has shown that the bright dreams of the theorist have not been fully realized. It is undoubtedly a great blessing to the poor in our crowded

down-town tenements to be able to obtain even pure unsterilized milk at a reasonable price, for a large experience among these people has taught the writer that it is well-nigh impossible in many of these districts to obtain good, reliable milk at any price, and hence, those children who are unfortunate enough to be deprived of their precious birthright—breast-milk—are almost universally fed on canned condensed milk.

The sterilized milk furnished by the dispensaries is dispensed in small bottles, one being intended for each feeding. Though the milk may be properly sterilized in the first instance, there are many sources of contamination difficult to avoid. Thus, if dispensed with the cotton plugs in the mouths of the bottles, it is more than probable that the people will tilt the bottles on their way home and so wet the cotton, and perhaps even spill the milk. It may be argued that this is carelessness, and is avoidable, but it must be remembered that the beneficiaries of this charity are densely ignorant, frequently both careless and lazy, and that even with the best intentions, it is very easy to tip the bottles and contaminate the milk when one has to carry a number of bottles of milk, perhaps one or two bottles of medicine, and a sick and fretful baby in the bargain. On the other hand, if the cotton plugs are removed and corks substituted for them just before the milk is dispensed, there is again a likelihood of infecting the milk. It is not difficult, then, to understand that it is easy in actual practice to neutralize all the good supposed to be derived from the sterilizing process.

Speaking of the quality of the milk, I am reminded of an interesting paper read before the Bellevue Hospital Alumni Association by Dr. John E. Allen, in which he described the methods of inspection and analysis in vogue in this city. The districts are frequently changed, as are also the inspectors, and a study of the reports of this department for the past few years shows that, as a result of the rigid inspection and enforcement of the law, there has been a constant and decided decrease in the number of arrests made necessary and in the quantity of milk destroyed each year, as compared with the total number of inspections. As the law requires the presence of a witness when a sample of milk is taken for analysis, or when a lot of milk is destroyed, the inspector is accompanied by a sanitary officer. When the milk is confiscated and destroyed, a sealed sample is given to the owner, and one sent to the chemist of the Board for examination. If any physician in the city has reason to suspect the quality of any milk-supply he has only to report his suspicion to the Board of Health, when a thorough inspection will be made, extending even back to the dairy, and a report sent to the physician.

It is a matter of everyday comment how rapidly modern surgical methods undergo modifications and improvements, and while the conservative surgeon looks askance on many of these changes, and fails to find as much real substantial progress as would at first appear, it cannot be denied that surgery is making most rapid strides, and that many important points in technique are overlooked by reason of its very rapid march. This observation would seem to apply with great force to the method of skin-grafting first brought forward by Thiersch, of Leipzig, in 1874, and which goes by his name. The method attracted no attention at the time of its first publication, and, in fact, it is only within the last half-dozen years that the method has been accepted as a useful surgical procedure. Only a very few years ago the Reverdin method with small skin-grafts was almost the only one in very general use, and, strangely enough, notwithstanding that it was tedious and disappointing to an exasperating degree, it held its place for fully a dozen years after Thiersch published his method. Now, a great change has come over the surgical world, and during the winter I received almost weekly invitations to be present at a "Thiersch skin-grafting."

Among the surgeons here who have given the method extended trial and study there is perhaps no more ardent advocate of it than Dr. Charles McBurney, and on this account it may perhaps be interesting to describe briefly his method of operating. The surface to be grafted is, of course, carefully cleaned, and all hemorrhage checked, and the surface from which the grafts are to be taken, usually the thigh, is rendered thoroughly aseptic. The grafts themselves consist of thin shavings of skin, from two to five inches in length and from one to one and a half inches in width, and they are removed with a sharp razor by a sort of sawing motion. Their removal is greatly facilitated, and larger and more uniform grafts secured, by holding the skin tense and flat by means of instruments made especially for this purpose. These usually consist of a broad flat piece of metal, with a handle and armed with teeth, which are pressed into the skin and held firmly by an assistant. If these instruments are not at hand the assistant may obtain a fair grip on the skin on either side of the field of operation by covering his hands with gloves made of Turkish towelling. As the grafts are removed they are placed in a ½ per cent. salt solution (a dram and a half to a quart). A useful point in the technique, and one sometimes overlooked, is the use of a piece of gutta-percha tissue as an aid in transferring the grafts from the salt solution to the area to be grafted. They may be quickly floated out flat upon a piece of this tissue, and from this slid off upon the wound. When the grafts are all in place, they are covered with strips of gutta-percha tissue, moistened with the salt solution, and over this are placed compresses wet with the same solution. The dressing is completed by covering the compresses with rubber tissue and a bandage. If the surface from which the grafts are removed be dressed in the same way there will be no discomfort, and healing will be complete in about a week; but if the surface be dressed with iodoform-gauze the granulations will creep into the meshes of the gauze, and the healing will be slower and more or less painful. Thiersch advocates changing the dressing over the grafts every four hours for the first few days, but Dr. McBurney has found this unnecessary, and has obtained equally good results by a change of dressing every two days. A dry dressing may usually be substituted after the first week. It will not do to bring the tender grafts in contact with strong antiseptic solutions, for these would destroy their vitality; *aseptic*, not antiseptic surgery is the keynote to success. If the surface to be grafted is covered with unhealthy granulations, these should be scraped away down to the original fatty layer, and then a bandage should be applied until the hemorrhage has entirely ceased. By this method not only are better results obtained than by the older

methods of skin-grafting, but the treatment rarely extends over as many weeks as it formerly did months. One of the most important advantages of the method is the latitude it affords the surgeon in operating upon malignant growths, for with the knowledge that he can quickly heal over a denuded area of almost any size, he no longer hesitates to cut very wide of the disease. It is not improbable that in the course of a few years, through the aid thus rendered by Thiersch's method of skin-grafting, the prognosis in carcinoma of the breast may be very favorably modified.

Another important aid has been rendered surgery by an improved method of examination in cases of suspected tumor of the bladder. In a suggestive communication on this subject, Dr. Frank Ferguson has explained the advantages of the new method, and has described the manner in which the examination is to be made. One has only to recall the numerous instances in which *large* tumors of the bladder are found at the time of operation, when their existence has scarcely been suspected, to comprehend the importance of this subject and to realize that hitherto our methods of diagnosis in these cases have not been what they should be. The method of examination advocated consists in collecting the sediment of the entire quantity of urine voided in the twenty-four hours by filtration through cheesecloth. Small fragments of tissue found in this sediment are then hardened in alcohol, embedded in celloidin, and numerous sections from these masses are then made and subjected to microscopic examination. The examinations should be made systematically and at short intervals. By this method Dr. Ferguson has been able to diagnosticate the existence of tumors of the bladder on several occasions, subsequent operations proving the correctness of his diagnoses. The usual method of collecting and examining the sediments from the urine is entirely inadequate in this class of cases.

The general tendency of our population to move to the upper sections of this city has led some of our hospitals to look for better accommodations in the same quarter. This is eminently proper, for it is certain that in this newer portion of the city they can secure more commodious and healthful surroundings. Among those to make a move in this direction is St. Luke's Hospital. Although the beautiful grounds surrounding the hospital in its present location on Fifth Avenue secure excellent air-space, the city in the immediate vicinity is closely built up, and more than all this, the building is not at all in accordance with our modern ideas of hospital-construction. A new hospital is to be built upon its recently-acquired property, at One-hundred-and-thirteenth Street and Morningside Park, alongside of the proposed Cathedral of St. John the Divine. The site is on high ground, and is a most excellent one from a sanitary point of view, and it is the intention of the hospital authorities to equip the hospital according to the most approved modern methods. It is reported that when the hospital removes to its new home it will be so far from the center of the city that several of the attending staff will find it so inconvenient that they will be compelled to resign. It is also rumored, but I trust that upon this point I am misinformed, that the hospital will open a dispensary. St. Luke's Hospital has always set its face against this sort of thing in the past, and has been so very careful not to infringe upon the rights and privileges of outside medical practitioners, that it has won for itself an enviable reputation in this direction, and it is to be hoped that it is not at this late day going to allow itself to be tainted with the modern dispensary idea. It has always had the interests of its patients at heart, yet it has heretofore been able to give them all needful attention without establishing an out-patient department or a dispensary, and we do not think any good reason has yet been presented for taking such a step.

CHICAGO

Quarantine Precautions—Cholera—Smallpox—Typhoid Fever—Regulation of Medical Practice.

THE Illinois State Board of Health met in this city, July 27th, at the Grand Pacific Hotel. There were present: Drs. W. A. Haskell, *President;* R. Ludlum, Chicago; A. L. Clark, Elgin; B. M. Griffith, Springfield; W. R. Mackenzie, Chester; D. H. Williams, Chicago, and Frank W. Reilly, Secretary of the Board.

The morning session was given up to executive business. An order was entered authorizing the secretary to issue a quarantine notice should Asiatic cholera, smallpox, or yellow fever appear in the United States or Canada.

The notice, as approved by the Board, declares contraband of quarantine any transportation company bringing into Illinois any person suffering from one of the three diseases named, or one who develops any of them within seventy-two hours after entering the State. This declaration having been made, the trains of any railway company or the vessels of any navigation company shall be stopped at the State line or before effecting a landing within the State, and held until inspected by a sanitary inspector of the Board and declared safe.

This action is based upon the inefficiency of quarantine regulations at the seacoast of both the United States and Canada. It is made the duty of all officers of the State and of officers of the peace to enforce the provisions of the order. The secretary was also ordered to submit for the examination of a bacteriologic expert any suspected case of Asiatic cholera in Illinois, in order that, on the one hand, groundless alarm may be avoided, and, on the other, that the presence of the disease may be positively determined at the earliest moment.

Smallpox was reported to have made its appearance within the last few months in Austria, Bavaria, Belgium, Brussels, Ceylon, Chile, China, Cuba, Egypt, England, France, India, Italy, the Netherlands, Poland, Russia, Spain, Sweden, and Switzerland. As a results of its prevalence in England, it has been introduced repeatedly into this country within the past three months. Outbreaks have been reported in New York, New Hampshire, Rhode Island, Pennsylvania, Ohio, Michigan, Wisconsin, Iowa, Nebraska, New Mexico, California, British Columbia, and the Dominion of Canada. Three cases have been imported into Chicago. As a result, the Board is insisting upon vaccination throughout the State. The Surgeon of the Third Regiment of the Illinois National Guard, now encamped at Springfield, has applied for material for the vaccination of his command, and Dr. Dewey, of the Kankakee Insane Asylum, has been furnished 1800 points for use in that institution.

Many of the railroad companies and large manufacturing companies have also undertaken to secure the vaccination of their employés.

The secretary reported progress in the investigation of the Chicago typhoid fever question, and presented maps giving the location of every death by typhoid fever during the years 1891 and 1892 respectively. These maps have been prepared at the secretary's request in the clerical department of the Chicago sanitary district. This study and analysis, together with the study of the sanitary conditions of the various localities, the character of the soil, of the filling-in material, of the sewerage and drainage, of the habitations and of the population, will form the groundwork for the report on which the secretary is now engaged. That there is more or less causal relation between typhoid fever and the character of the water-supply in this city would seem to be borne out by the partial study already made of these maps, but that there are other factors included in the problem is also clear.

A report was made on medical schools by the committee—Drs. Clark, Griffith, and Ludlam. Upon it were based several orders. One demands a supplementary examination in writing before the Board of all graduates from a medical school in existence less than five years.

The rules recommended in the report provide: 1. That any established and legally chartered medical institution shall be held to be in good standing when its requirements for a medical education are those prevailing in a majority of the reputable medical colleges of the United States and Canada; 2. That not less than five years' actual existence and compliance with the first regulation shall be necessary to establish its reputability; 3. That graduates of schools other than those first described may obtain State certificates by passing examination in ten specified subjects before the Board, for which no fee shall be charged; and, 4. That any medical institution which is not recognized by the American Medical Association, the American Institute of Homeopathy, the National Eclectic Medical Association, or by the American Association of Physio-Medical Physicians and Surgeons, as the case may be, shall be declared and held to be not in good standing for the purposes of the Illinois Medical Practice Act.

It was also ordered that the diplomas of the institution known variously as the "German College of Medicine and Obstetrics," as the "German-American Homeopathic Medical College," and as the "German Medical College," 512 Noble Street, Chicago, Illinois, be not recognized by the Illinois State Board of Health, and that State certificate No. 8219, issued April 21, 1888, by the State Board of Health, be revoked and declared null and void, proof having been submitted that the present holder of said State certificate, one Philip H. Simons, *alias* Philip Simon, *alias* Charles Rohning, of Brussels, Calhoun County, in the State of Illinois, is guilty of unprofessional and dishonorable conduct, and any act of practice of medicine or surgery in this State on the part of the said Philip H. Simons, *alias* Philip Simon, *alias* Philip Rohning, is illegal under section 12 of said Act.

Before the adjournment Drs. W. A. Haskell, B. M. Griffith, and W. R. Mackenzie were elected delegates to attend the meeting of the American Public Health Association in the City of Mexico, November 7, 1892.

CODE OR NO CODE?

NO CODE.

To the Editor of THE MEDICAL NEWS,

SIR: You say opportunely and pertinently, "We are confronted with a condition and not a theory."

Permit me to state the condition:

I. The presence throughout our country of a medical profession many times more numerous than required for the good of the country.

II. The presence and active functioning of an absurd and scandalous number of private concerns—medical schools—whose chief object in life is to add largely to this already overfilled profession, regardless of the qualifications, fitness or competency of the men and women so added.

III. The natural and resulting condition that in the public estimation the average doctor is no better than the homeopathist, the eclectic, the clairvoyant, the faith-curer, and not nearly so good as the patent-medicine man, or the bichloride-of-gold healer.

This, at any rate, was the condition prior to 1878. Upon this scene enters the Judicial Council of the American Medical Association, composed of the men chiefly responsible for the condition you and we all recognize, with a recommendation destined to live as the greatest piece of economic charlatanism in history—the code of ethics of the American Medical Association. Whoever subscribes to this code becomes thereby an honorable member of the American medical profession, howbeit, he himself may be unable to read, write or cipher.

In 1878 the people, recognizing the "condition" and the quackish practice of the American Medical Association, led by the great Commonwealth of Illinois, began a very different treatment by adopting State license as a the only means of securing the services of a competent medical profession. Alabama, Florida, Minnesota, Mississippi, Missouri, Montana, New Jersey, New York, North Carolina, North Dakota, Oregon, South Carolina, Virginia, Washington, and West Virginia, for the sake of their people, whose lives and health they desire to protect, have placed similar laws upon their statute books, and in these States the code has ceased to have a *raison d'être*.

The people have made the diagnosis, the people have taken the condition in hand for treatment; meanwhile, the American Medical Association has only to waste time in the matter of code revision as it did in the matter of raising the standard of medical education, and in the near future State license will become the rule in every part of the American Republic. Then revision or no revision will be matters of equal indifference. A really learned and honorable medical profession has no need of *fiat* respectability.

HENRY REED HOPKINS, M.D.

BUFFALO, N. Y.

THE NEED OF A CODE.

To the Editor of THE MEDICAL NEWS,

SIR: Responding to the call of your editorial of July 16th, asking for "short and pithy" communications on "The Proposed Revision of the Code," I would offer a few suggestions on the primary or fundamental questions discussed in your editorial, "The Need of a Code."

For this purpose the profession may be divided into three distinct classes: 1st. Those of "honorable repute and blameless life"—your "Gideon's band," a select, very small, highly intelligent, and cultivated class. 2d. A class quite the opposite in morals, possessing intelligence and culture of a high order, yet baseless, unscrupulous rascals—numerically a very much larger class. 3d. An intermediate class, partaking of the elements of moral character of the other two variously mingled, and in intelligence and education rating below the average of each.

Some, as you have suggested, will maintain that a code is inapplicable to the first two—as being unnecessary in the one instance, and as powerless for good in the other. This I deny. On the part of the first it is a public and continual protest and maintenance of right and honorable conduct, as against the conduct of the second class before the enlightened world, thus helping to give each its mark of distinction. Particularly is this difference between the two classes capable of being made emphatic and pronounced in intelligent communities, where the code has been judiciously circulated among the laity.

If inapplicable, however, to the first two classes for a direct and personal effect upon the conduct of either, I hardly think it can be regarded as such for the third class, numerically the largest of all. The code, as maintained in practice by the first class and published to the world, circulating among all classes of reading and thinking laymen, as well as of physicians, has an *educational and reformatory* effect upon this element in the profession. By this class the code is oftener slighted or violated through sheer ignorance or misapprehension than otherwise. And herein, indeed, lies the fundamental truth in regard to the use and application of all law—the prevention of crime or wrong conduct through the education and reformation of character. And in this connection, and to conclude, would a recitation or two on the code, with a few instructive illustrative lectures before graduation, be out of place in the curriculum of the medical schools? Yours, etc., GEORGE COWAN.

DANVILLE, KY.

NEWS ITEMS.

The American Dermatological Association will hold its sixteenth annual meeting at New London, Conn., September 13, 14 and 15, 1892.

The arranged program will include the following:

President's Address.

"Iodine and Carbolic Acid in the Treatment of Skin Diseases," by Dr. C. W. Cutler.

"Additional Note on the Treatment of Erysipelas, Based Upon a Second Series of Fifty Cases," by Dr. C. W. Allen.

"A Suggestion for Operative Procedure on Erectile Nevi Over Fontanels," etc., by Dr. S. Sherwell.

"How Should Dermatology be Taught?" by Dr. G. H. Fox.

"A Somewhat Unusual Case of Lupus Ulceration of the Nose," by Dr. H. W. Stelwagon.

"Lupus Vulgaris following Exposure to Tuberculous Sputa," by Dr. W. T. Corlett.

"Notes on the Treatment of Lupus Erythematosus," by Dr. J. Zeisler.

Discussion on Alopecia Areata:

1. Are there two forms of alopecia areata; one parasitic and one neuropathic?

2. Is there sufficient evidence to prove the contagious nature of the disease?

3. Does arsenic or any other internal remedy influence the course of the disease?

4. What is the comparative value of carbolic acid, and of other topical remedies?

5. Will epilation of the margin of the patch prevent its spread?

6. What circumstances influence the prognosis of the disease?

"Alopecia Prematura; Its Most Frequent Cause," by Dr. G. T. Elliot.

"Cases of Favus Contagion from the Lower Animals," by Dr. S. Sherwell.

"Some Observations on the Growth of Achorion Schœnleinii in America," by Dr. L. Heitzmann.

"Morphea Atrophica," by Dr. R. W. Taylor.

"Psorospermosis," by Dr. M. B. Hartzell.

"Report of a Case of Adenoma Sebaceum, with Microscopic Drawings," by Dr. J. A. Fordyce.

"Concomitance and Sequence in Skin Eruptions, and the Influence of One Dermatosis Upon Another," by Dr. C. W. Allen.

"The Cicatrices of Syphilis," by Dr. J. N. Hyde.

"An Unusual Case of Syphilis," by Dr. R. B. Morison.

"An Exaggerated Case of Impetigo Contagiosa," by Dr. G. T. Elliot.

"Notes On a Recent Visit to the Leper Hospital at Havana; Leprosy in Charleston, S. C.," etc., by Dr. W. T. Corlett.

"Notes on the Use of Thilanin," by Dr. G. H. Fox.

Third Congress of Tuberculosis.—The Third Congress of Tuberculosis will be held at Paris in the latter part of July, 1893. The following propositions will be discussed: The role played by contagion and heredity, respectively, in the propagation of tuberculosis. Infectious diseases as provocative causes of tuberculosis; the part played by certain of them in the localization of tuberculosis; for instance, gonorrhea in the development of tuberculosis of the testicle, influenza in the development or aggravation of pulmonary tuberculosis. The lulls of tuberculosis; their duration; the means of recognizing their cessation in advance; the causes of recurrence. The various means of diagnosis of bovine tuberculosis, in particular the determination if the inoculation of tuberculin is a certain means of diagnosis of tuberculosis in cattle. The dangers that may arise from the interment of the bodies of tuberculous persons; the wisdom of the substitution of cremation for interment; the necessity for destroying the tubercle-bacilli in cadavers. New modes of treatment, prophylactic and curative, based upon etiology. The utility of the generalization of inspection of meat. A prize of 3000 francs ($750) will be awarded the best essay upon "The Means of Diagnosis of Latent Tuberculosis, Before its Appearance or After its Cure."

CORRECTION.

On the tenth line from the bottom of the second column of page 131 of THE MEDICAL NEWS of July 30th, the figures 108 should have been 103.